

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS**

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3
4
5 SEOAN MARLER,)
6)
7 Petitioner,)
8 v.) Case Number:
9 UNITED STATES DEPARTMENT OF) FILED: MAY 28, 2008
10 HOMELAND SECURITY, CITIZENSHIP) 08CV3077 PH
11 AND IMMIGRANT SERVICES,) JUDGE COAR
12 GERARD HEINAUER, in his official) MAGISTRATE JUDGE ASHMAN
13 capacity as Acting Director of the)
14 NEBRASKA SERVICE CENTER OF US)
15 CIS, MICHAEL B.MUKASEY, Attorney)
16 General of the United States, MICHAEL)
17 CHERTOFF, Secretary of the Department)
18 of Homeland Security, and the UNITED)
19 STATES OF AMERICA,)
20 Respondents.)
21)
22)
23)
24)
25)
26)
27)

PETITION FOR WRIT OF MANDAMUS

19 NOW COMES the Petitioner, SEOAN MARLER, by and through her attorneys,
20 CARPENTER & CAPT, CHARTERED, and Petitions this Court for an Order against
21 Defendant UNITED STATES CITIZENSHIP AND IMMIGRATION SERVICES (USCIS)
22 directing that it adjudicate Petitioner's I-140 Petition filed on October 9, 2007, and
23 subsequent I-485 application to adjust status filed on November 7, 2007. Petitioner states
24 the following in support of this Petition:
25
26
27

Carpenter & Capt,
Chtd.
53 W. Jackson
Suite 1752
Chicago, IL 60604
(312) 803-5110

INTRODUCTION

This action seeks an Order compelling the USCIS's Nebraska Service Center ("NSC"), to immediately adjudicate Petitioner's previously filed I-140 petition through the University of Chicago, and I-485 application to adjust her status to that of a permanent resident.

Seoan Marler's current employer, the University of Chicago Department of Organismal Biology & Anatomy, filed an I-140 Petition for Alien Worker, with an uncertified ETA 9089 per the allowance for such a filing under 20 CFR §656.15(a). The labor certification application specifies the title of Clinical Research Technologist and cited, *inter alia*, a minimum qualification of a Bachelor's Degree in Biological Sciences. See Copy of ETA 9089 attached hereto as Ex. 1. Ms. Marler possesses such a degree from the University of Chicago, with a specialty in neuroscience.

According to the University of Chicago's letter in support of the I-140 Petition for Alien Worker, the position at issue involves conducting research and analyzing findings in a project investigating epileptogenesis and brain cancer. This research will involve performing extracellular and intracellular electrophysiology of human and mouse tissue, the maintenance of organotypic brain culture samples and the utilization of genetic manipulation for investigating specific pathways of cancer metastasis. *See* copy of letter in support of I-140, attached as Ex. 2. According to virtually all of the writers in support of Ms. Marler's bid for permanent residency, her work is particularly important for finding new treatments and potential cures for epilepsy in children. *See* letters in support of I-140 in the EB-2 category, attached hereto as Ex. 3.

1 The University of Chicago filed a petition for Ms. Marler's permanent residency as
2 an Alien Worker with exceptional ability, thereby qualifying her for the second
3 preference category of the employment-based visa system under the Immigration and
4 Nationality Act ("EB-2"). INA §203(b)(2)(A). That application was submitted on
5 October 9, 2007. See I-797 Receipt Notice attached as Ex. 4. Ms. Marler subsequently
6 filed Form I-485, Application to Adjust Status on November 7, 2007, showing that she
7 had a pending I-140 in a category that was current. *See* INA §245; I-797 Receipt Notice
8 attached as Ex. 5.
9

10 Ms. Marler procured an employment authorization document pursuant to the
11 aforementioned adjustment of status application on January 18, 2008. *See* Copy of
12 Employment Authorization Document ("EAD") attached as Ex. 6. Her I-140 petition
13 remains pending at this time. *See* printout from the U.S. CIS website's status check
14 function, attached as Ex. 7.
15

16 The USCIS issues processing times for all petitions each month, and currently
17 quotes a processing time of June 16, 2007 as the filing date for which it is currently
18 adjudicating petitions. *See Nebraska Service Center's Processing Time Report*, May 15,
19 2008, attached as Ex. 8. Ms. Marler does not seek to have her I-485 application
20 adjudicated immediately, because it is only the approval of the I-140 that is necessary
21 for her to consider additional employment opportunities under the portability terms of
22 the American Competitiveness in the Twenty First Century Act ("AC21"). Specifically,
23 §106(c) of AC21 allows a foreign national to move ("port" is how AC21 refers to
24 changing employers) to a new employer so long as the new employment will involve
25
26
27

1 the same or “substantially similar” job duties as reflected in the underlying LCA and I-
 2 140 petition. It is therefore critical for Ms. Marler’s future that the I-140 be approved as
 3 soon as practicable. Specifically, Ms. Marler has an employment opportunity in a
 4 substantially similar position with the University of Washington Hospitals in
 5 Washington State. This position will entail a range of duties that Ms. Marler is uniquely
 6 qualified to handle, and will result in new treatments and potential cures for children in
 7 that geographic region stricken with epilepsy.
 8
 9

10 **STATEMENT OF THE CASE**

11 **Jurisdiction**

- 12
 13 1. Jurisdiction is conferred on this Court with respect to a Writ of Mandamus by 28
 14 U.S.C. §1361, which provides for mandamus jurisdiction to compel officers and
 15 employees of the United States to perform a duty owed to the Petitioners.
- 16 2. The Agency Procedures Act (hereinafter “APA”) provides that a person “adversely
 17 affected or aggrieved by agency actions [or failure to act, *see* 5 U.S.C. §§701(b)(2),
 18 551(13)]... is entitled to judicial review thereof.” 5 U.S.C. §702. The APA also
 19 requires the government to act within a reasonable amount of time. 5 U.S.C.
 20 §555(b).
 21
- 22 3. Furthermore, the Seventh Circuit has held that INA §242(a)(2)(B)(i) does not divest
 23 courts of jurisdiction in adjustment of status cases where no actual decision was
 24 made on the merits. Iddir v. I.N.S., 301 F.3d 492, 497 (7th Cir. 2002). The Seventh
 25 Circuit held that the above-referenced section of the INA “only bars review of actual
 26 discretionary decisions to grant or deny relief under the enumerated sections.” Id.
 27

1 4. In allowing a mandamus action to proceed, the Seventh Circuit favorably adopted
 2 and cited language from another court which held, that “Plaintiff is not seeking
 3 review of a decision or action, which would be barred, but is seeking remediation of
 4 the lack of action, which is not barred.” *Id.* at 498 (citing Nyaga v. Ashcroft, 186
 5 F.Supp.2d 1244, 1250-53 (N.D.Ga. 2002) (Aff’d Nyaga v. Ashcroft, 323 F.3d 906
 6 (11th Cir. 2003). *See* El-Khader v. Monica, 366 F.3d 562, 563, n.3 (7th Cir. 2004)
 7 (Seventh Circuit held that “INS’s **final decision** ... [was] precluded from judicial
 8 review pursuant to §1252 (a)(2)(B)(ii) (emphasis added).) Even though the case at
 9 bar involves an I-140 petition and not an I-485 application, at least with respect to
 10 the relief being requested at this juncture, the reasoning of Iddir still applies. The
 11 relief sought is therefore not discretionary and in fact, is by definition a mandatory
 12 duty to adjudicate. Iddir at 497-498.

13 Venue

14 5. Pursuant to 28 U.S.C. §1391(e), as amended, provides that in a civil action in which
 15 each defendant is an officer or employee of the United States in any agency thereof
 16 acting in his official capacity, or under color of legal authority or that of any agency
 17 of the United States, the action may be brought in any judicial district in which any
 18 defendant resides. Defendants maintain an agency presence in Chicago, and both
 19 Petitioner resides here as well.

The Parties

6. Seoan Marler is the beneficiary of the pending I-140 application through the University of Chicago, and the applicant for adjustment of status. The United States Citizenship and Immigration Service's Nebraska Service Center is the office that is in possession of the pending I-140. Michael B. Mukasey, Attorney General, is a named party pursuant to Federal Rule of Civil Procedure 4.

COUNT I: FAILURE OF THE UNITED STATES DEPARTMENT OF HOMELAND SECURITY'S CITIZENSHIP AND IMMIGRANT SERVICES DIVISION, NEBRASKA SERVICE CENTER to ADJUDICATE PETITIONER'S I-140 through the UNIVERSITY OF CHICAGO IN A TIMELY MANNER

7. Mandamus actions can be used to compel action by an agency, so long as the action is not discretionary. An agency's decision not to act due to a policy position that effectively precludes a timely decision from being made is properly subject to an action in Mandamus. *See Ganem v. Heckler*, 746 F.2d 844 (D.C. Cir. 1984). Further, the APA provides, "The reviewing Court shall – (1) compel agency action unlawfully withheld or unreasonably delayed". 5 U.S.C. §706. This creates a right of judicial review of agency action unlawfully withheld. *Rank v. Nimmo*, 677 F.2d 692, 698 (9th Cir. 1982).

8. This action is grounded in the U.S. CIS Nebraska Service Center's neglect in addressing the I-140 filed in the EB-2 category on behalf of Ms. Marler. Ordinarily, a delay of seven months would not be so out of line as to be deserving of Mandamus relief. Reasonable, however, is subjectively defined depending on objective circumstances. Here, Ms. Marler is in the untenable position of losing an opportunity to advance treatment and cures across another platform and population

1 in the State of Washington. Additionally, Ms. Marler has aspirations of applying for
 2 medical school in 2009, having had to forego such an application for the last three
 3 years in the absence of lawful permanent resident status.
 4

- 5 9. Mandamus is an appropriate remedy here because (1) the Petitioner has a clear right
 6 to the relief sought; (2) the Respondents have a clear duty to perform; and (3) no
 7 other adequate remedy is available. *See Blaney v. United States*, 34 F.3d 509, 513
 8 (7th Cir. 1994); *Iddir v. INS*, 301 F.3d 492, 499 (7th Cir. 2002).
 9

10 Petitioner has the right to have her I-140 and subsequently filed I-485
 11 adjudicated within a reasonable time. She has paid the filing fees, and thoroughly
 12 documented the petition and application. The only reason she seeks this Court's
 13 intervention is because a new position elsewhere involving new, cutting-edge
 14 research is now available, and because her ability to attend medical school in 2009
 15 depends on the government properly adjudicating both of the aforementioned
 16 applications.
 17

18 Courts have consistently held that the INS has a non-discretionary duty to
 19 adjudicate applications within a reasonable time. *See Yu v. Brown*, 36 F.Supp.2d
 20 922, 931 (D.N.M. 1999) ("All other courts addressing this question have held that
 21 INS has a non-discretionary duty to process applications for LPR status as well as
 22 all other immigration applications.")(citing various cases); *id.* at 932 (holding that
 23 the INS "owes Plaintiffs a non-discretionary duty to complete processing of
 24 Plaintiffs' [LPR] applications in a reasonable time.").
 25

26 Reasonability here is defined by what injustice will ensue if the government
 27

1 is permitted to take as much time as its inner workings and random processing times
 2 dictate. The consequences of not compelling adjudication of the I-140 will be for the
 3 University of Washington Hospitals to miss out on Ms. Marler's significantly unique
 4 talents at the forefront of battling childhood epilepsy, and her having to forego
 5 medical school for another year. Reasonability dictates action now.
 6

7 No other adequate remedy is available; Petitioners have exercised patience
 8 in allowing the NSC to adjudicate the I-140. Phone calls to the 1-800 number
 9 provided by the government have yielded no meaningful response. Inquires with
 10 Senator Durbin's office have also come up empty.
 11

12 **COUNT II: ATTORNEY'S FEE AND COSTS UNDER THE EQUAL**
 13 **ACCESS TO JUSTICE ACT (EAJA)**

14 10. Plaintiffs bringing successful mandamus actions may be entitled to a grant of
 15 attorney's fees and costs against the INS under the EAJA, 28 U.S.C. 2412(d)(1)(A).
 16 This is so even though the Supreme Court has ruled that EAJA does not authorize
 17 payment of attorney's fees to prevailing parties in **administrative** deportation
 18 proceedings. *See Ardestani v. INS*, 502 U.S. 129 (1991). This is because a
 19 mandamus action is not part of an administrative deportation proceeding.
 20

21 11. To prevail under EAJA, a plaintiff must establish that he or she is a "prevailing
 22 party" in a suit against the United States or a federal agency or official. Fees are
 23 awarded unless the court finds that the position of the defendant was substantially
 24 justified or that special circumstances make an award unjust. To be a "prevailing
 25 party" the plaintiff need only be successful on a significant issue in the litigation.
 26 Courts have awarded EAJA fees and costs where a mandamus action was filed to
 27

1 force the INS to adjudicate an adjustment petition. Jefrey v. INS, 710 F.Supp. 486
 2 (S.D.N.Y. 1989), as well as in a variety of other cases where INS' dilatory actions
 3 prompted the lawsuit. *See e.g.* Shu Chen v. Slattery, 842 F.Supp. 597 (D.C.D.C.
 4 1994). While the catalyst doctrine arguably has been abandoned by the U.S.
 5 Supreme Court, fees will still be appropriate where a matter goes to hearing and a
 6 finding against the government is made. Buckhannon Board and Care Home, Inc. v.
 7 West Virginia Department of Health and Human Resources, et al., 532 U.S. 598, 121
 8 S.Ct. 1835 (2001).

11 WHEREFORE, Petitioner respectfully prays this Honorable Court to Enter an Order
 12 Directing the Defendant to take all necessary steps to adjudicate the University of
 13 Chicago's petition on behalf of Ms. Marler and grant Petitioner's request attorney's fees
 14 and costs under the Equal Access to Justice Act.

16 Respectfully Submitted,

18

Robert Carpenter
 19 One of Petitioner's Attorneys

20 CARPENTER & CAPT, CHTD.
 21 Attorneys for Petitioners
 22 53 W. Jackson Blvd., Ste. 1752
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 Expiration Date: 03/31/2008

Application for Permanent Employment Certification

ETA Form 9089

U.S. Department of Labor



Please read and review the filing instructions before completing this form. A copy of the instructions can be found at <http://workforcesecurity.doleta.gov/foreign/>.

Employing or continuing to employ an alien unauthorized to work in the United States is illegal and may subject the employer to criminal prosecution, civil money penalties, or both.

A. Refiling Instructions

1. Are you seeking to utilize the filing date from a previously submitted Application for Alien Employment Certification (ETA 750)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1-A. If Yes, enter the previous filing date		
1-B. Indicate the previous SWA or local office case number OR if not available, specify state where case was originally filed:		

B. Schedule A or Shepherd Information

1. Is this application in support of a Schedule A or Shepherd Occupation?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, do NOT send this application to the Department of Labor. All applications in support of Schedule A or Shepherd Occupations must be sent directly to the appropriate Department of Homeland Security office.		

C. Employer Information (Headquarters or Main Office)

1. Employer's name The University of Chicago - Department of Organismal Biology & Anatomy			
2. Address 1 1027 E. 57th Street			
Address 2 A107			
3. City Chicago	State/Province IL	Country USA	Postal code 60637
4. Phone number 773-834-1967		Extension	
5. Number of employees 12,000		6. Year commenced business 1892	
7. FEIN (Federal Employer Identification Number) 36-2177139		8. NAICS code 611310	
9. Is the employer a closely held corporation, partnership, or sole proprietorship in which the alien has an ownership interest, or is there a familial relationship between the owners, stockholders, partners, corporate officers, incorporators, and the alien?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

D. Employer Contact Information (This section must be filled out. This information must be different from the agent or attorney information listed in Section E).

1. Contact's last name SNIDER	First name Lisa	Middle initial
2. Address 1 1027 E. 57th Street		
Address 2 A107		
3. City Chicago	State/Province IL	Country USA
4. Phone number 773-834-1967	Extension	
5. E-mail address lsnider@uchicago.edu		

OMB Approval: 1205-0451
Expiration Date: 03/31/2008

Application for Permanent Employment Certification

ETA Form 9089
U.S. Department of Labor**E. Agent or Attorney Information (If applicable)**

1. Agent or attorney's last name CARPENTER	First name Robert	Middle initial T.
2. Firm name CARPENTER & CAPT, CHTD.		
3. Firm EIN 36-4042366	4. Phone number 312-803-5110	Extension
5. Address 1 53 W. Jackson Blvd.		
Address 2 Ste. 1752		
6. City Chicago	State/Province IL	Country USA
		Postal code 60604
7. E-mail address rcarpenter@carpenterandcapt.com		

F. Prevailing Wage Information (as provided by the State Workforce Agency)

1. Prevailing wage tracking number (if applicable)	2. SOC/O*NET(OES) code 29-2011
3. Occupation Title Clinical Research Technologist	4. Skill Level 4
5. Prevailing wage Per: (Choose only one) \$51,605 <input type="checkbox"/> Hour <input type="checkbox"/> Week <input type="checkbox"/> Bi-Weekly <input type="checkbox"/> Month <input checked="" type="checkbox"/> Year	
6. Prevailing wage source (Choose only one) <input checked="" type="checkbox"/> OES <input type="checkbox"/> CBA <input type="checkbox"/> Employer Conducted Survey <input type="checkbox"/> DBA <input type="checkbox"/> SCA <input type="checkbox"/> Other	
6-A. If Other is indicated in question 6, specify:	
7. Determination date	8. Expiration date

G. Wage Offer Information

1. Offered wage From: \$55,000 To: (Optional) \$	Per: (Choose only one) <input type="checkbox"/> Hour <input type="checkbox"/> Week <input type="checkbox"/> Bi-Weekly <input type="checkbox"/> Month <input checked="" type="checkbox"/> Year
---	--

H. Job Opportunity Information (Where work will be performed)

1. Primary worksite (where work is to be performed) address 1 The University of Chicago - The Department of Organismal Biology & Anatomy		
Address 2 1027 E. 57th Street		
2. City Chicago	State IL	Postal code 60637
3. Job title Clinical Research Technologist		
4. Education: minimum level required: <input type="checkbox"/> None <input type="checkbox"/> High School <input type="checkbox"/> Associate's <input checked="" type="checkbox"/> Bachelor's <input type="checkbox"/> Master's <input type="checkbox"/> Doctorate <input type="checkbox"/> Other		
4-A. If Other is indicated in question 4, specify the education required:		
4-B. Major field of study Biological Sciences		
5. Is training required in the job opportunity? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		5-A. If Yes, number of months of training required:

OMB Approval: 1205-0451
Expiration Date: 03/31/2008

Application for Permanent Employment Certification

ETA Form 9089
U.S. Department of Labor

H. Job Opportunity Information Continued

5-B. Indicate the field of training:	
6. Is experience in the job offered required for the job? 6-A. If Yes, number of months experience required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
7. Is there an alternate field of study that is acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No	
7-A. If Yes, specify the major field of study:	
8. Is there an alternate combination of education and experience that is acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No	
8-A. If Yes, specify the alternate level of education required: <input type="checkbox"/> None <input type="checkbox"/> High School <input type="checkbox"/> Associate's <input type="checkbox"/> Bachelor's <input type="checkbox"/> Master's <input type="checkbox"/> Doctorate <input type="checkbox"/> Other	
8-B. If Other is indicated in question 8-A, indicate the alternate level of education required:	
8-C. If applicable, indicate the number of years experience acceptable in question 8:	
9. Is a foreign educational equivalent acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No	
10. Is experience in an alternate occupation acceptable? 10-A. If Yes, number of months experience in alternate occupation required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
10-B. Identify the job title of the acceptable alternate occupation:	
11. Job duties – If submitting by mail, add attachment if necessary. Job duties description must begin in this space. Conduct laboratory research and analyze findings in project investigating epileptogenesis. Involves performing patch, sharp and extracellular electrophysiology of human & mouse tissue. Responsible for EEG data collection in adults and children, and quantitative analysis using nonlinear systems tools. Will use Axoclamp, Igor, and Matlab softwares. Maintains organotypic brain culture of tissue samples, and performs survival surgery.	
12. Are the job opportunity's requirements normal for the occupation? <i>If the answer to this question is No, the employer must be prepared to provide documentation demonstrating that the job requirements are supported by business necessity.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
13. Is knowledge of a foreign language required to perform the job duties? <i>If the answer to this question is Yes, the employer must be prepared to provide documentation demonstrating that the language requirements are supported by business necessity.</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
14. Specific skills or other requirements – If submitting by mail, add attachment if necessary. Skills description must begin in this space.	

OMB Approval: 1205-0451
Expiration Date: 03/31/2008

Application for Permanent Employment Certification

ETA Form 9089
U.S. Department of Labor**H. Job Opportunity Information Continued**

15. Does this application involve a job opportunity that includes a combination of occupations?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
16. Is the position identified in this application being offered to the alien identified in Section J?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
17. Does the job require the alien to live on the employer's premises?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
18. Is the application for a live-in household domestic service worker?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
18-A. If Yes, have the employer and the alien executed the required employment contract and has the employer provided a copy of the contract to the alien?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA

I. Recruitment Information**a. Occupation Type – All must complete this section.**

1. Is this application for a professional occupation , other than a college or university teacher? Professional occupations are those for which a bachelor's degree (or equivalent) is normally required.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Is this application for a college or university teacher? If Yes, complete questions 2-A and 2-B below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2-A. Did you select the candidate using a competitive recruitment and selection process?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2-B. Did you use the basic recruitment process for professional occupations?	<input type="checkbox"/> Yes <input type="checkbox"/> No

b. Special Recruitment and Documentation Procedures for College and University Teachers – Complete only if the answer to question I.a.2-A is Yes.

3. Date alien selected:
4. Name and date of national professional journal in which advertisement was placed:
5. Specify additional recruitment information in this space. Add an attachment if necessary.

c. Professional/Non-Professional Information – Complete this section unless your answer to question B.1 or I.a.2-A is YES.

6. Start date for the SWA job order	7. End date for the SWA job order
8. Is there a Sunday edition of the newspaper in the area of intended employment?	<input type="checkbox"/> Yes <input type="checkbox"/> No
9. Name of newspaper (of general circulation) in which the first advertisement was placed:	
10. Date of first advertisement identified in question 9:	
11. Name of newspaper or professional journal (if applicable) in which second advertisement was placed:	
Chicago Tribune	<input type="checkbox"/> Newspaper <input type="checkbox"/> Journal

OMB Approval: 1205-0451
Expiration Date: 03/31/2008

Application for Permanent Employment Certification

ETA Form 9089
U.S. Department of Labor**I. Recruitment Information Continued**

12. Date of second newspaper advertisement or date of publication of journal identified in question 11:

d. Professional Recruitment Information – Complete if the answer to question I.a.1 is YES or if the answer to I.a.2-B is YES. Complete at least 3 of the items.

13. Dates advertised at job fair From: To:	14. Dates of on-campus recruiting From: To:
15. Dates posted on employer web site From: To:	16. Dates advertised with trade or professional organization From: To:
17. Dates listed with job search web site From: To:	18. Dates listed with private employment firm From: To:
19. Dates advertised with employee referral program From: To:	20. Dates advertised with campus placement office From: To:
21. Dates advertised with local or ethnic newspaper From: To:	22. Dates advertised with radio or TV ads From: To:

e. General Information – All must complete this section.

23. Has the employer received payment of any kind for the submission of this application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
23-A. If Yes, describe details of the payment including the amount, date and purpose of the payment :	
24. Has the bargaining representative for workers in the occupation in which the alien will be employed been provided with notice of this filing at least 30 days but not more than 180 days before the date the application is filed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
25. If there is no bargaining representative, has a notice of this filing been posted for 10 business days in a conspicuous location at the place of employment, ending at least 30 days before but not more than 180 days before the date the application is filed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
26. Has the employer had a layoff in the area of intended employment in the occupation involved in this application or in a related occupation within the six months immediately preceding the filing of this application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
26-A. If Yes, were the laid off U.S. workers notified and considered for the job opportunity for which certification is sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA

J. Alien Information (This section must be filled out. This information must be different from the agent or attorney information listed in Section E).

1. Alien's last name MARLER	First name Sean	Full middle name
2. Current address 1 210 S. Des Plaines St.		
Address 2 #310		
3. City Chicago	State/Province IL	Country USA
4. Phone number of current residence 312-213-8248		Postal code 60661
5. Country of citizenship KOREA	6. Country of birth KOREA	
7. Alien's date of birth 06/13/1981	8. Class of admission B2	
9. Alien registration number (A#) NONE	10. Alien admission number (I-94) 000500913 07	
11. Education: highest level achieved relevant to the requested occupation: <input type="checkbox"/> None <input type="checkbox"/> High School <input type="checkbox"/> Associate's <input checked="" type="checkbox"/> Bachelor's <input type="checkbox"/> Master's <input type="checkbox"/> Doctorate <input type="checkbox"/> Other		

OMB Approval: 1205-0451
Expiration Date: 03/31/2008

Application for Permanent Employment Certification

ETA Form 9089
U.S. Department of Labor**J. Alien Information Continued**

11-A. If Other indicated in question 11, specify			
12. Specify major field(s) of study Economics & Biological Sciences			
13. Year relevant education completed 2004			
14. Institution where relevant education specified in question 11 was received The University of Chicago			
15. Address 1 of conferring institution 5801 S. Ellis Ave			
Address 2			
16. City Chicago	State/Province IL	Country USA	Postal code 60637
17. Did the alien complete the training required for the requested job opportunity, as indicated in question H.5?		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> NA
18. Does the alien have the experience as required for the requested job opportunity indicated in question H.6?		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> NA
19. Does the alien possess the alternate combination of education and experience as indicated in question H.8?		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> NA
20. Does the alien have the experience in an alternate occupation specified in question H.10?		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> NA
21. Did the alien gain any of the qualifying experience with the employer in a position substantially comparable to the job opportunity requested?		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> NA
22. Did the employer pay for any of the alien's education or training necessary to satisfy any of the employer's job requirements for this position?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
23. Is the alien currently employed by the petitioning employer?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

K. Alien Work Experience

List all jobs the alien has held during the past 3 years. Also list any other experience that qualifies the alien for the job opportunity for which the employer is seeking certification.

a. Job 1

1. Employer name The University of Chicago Children's Hospital - Pediatric Epilepsy Center			
2. Address 1 5841 S. Maryland Ave.			
Address 2			
3. City Chicago	State/Province IL	Country USA	Postal code 60637
4. Type of business University - Health Care		5. Job title Research Assistant	
6. Start date 06/01/2001	7. End date	8. Number of hours worked per week 30	

OMB Approval: 1205-0451
 Expiration Date: 03/31/2008

Application for Permanent Employment Certification

ETA Form 9089
 U.S. Department of Labor



K. Alien Work Experience Continued

9. Job details (duties performed, use of tools, machines, equipment, skills, qualifications, certifications, licenses, etc. Include the phone number of the employer and the name of the alien's supervisor.)

Analyze EEG recordings from pediatric patients using non-linear systems analysis to predict and localize seizures. Investigate the effects of various anticonvulsants on dynamic changes of the brain activity. Study the propagation of seizures in intracranial and extracranial EEG recordings for surgical procedures. Search for articles in neurophysiology for further research and publication. Initiate organotypic culture plates with dissociated mouse cortical slices as a model of epileptogenesis. Prepare culture media that is modified in concentrations of ions for investigation of specific channels. Collect electrophysiological data from culture slices using whole-cell patch clamp method. Assist in obtaining human brain slices and transporting back to the investigation site. Record intrinsic cellular and network activity of human brain cells using patch clamp method.

b. Job 2

1. Employer name The University of Chicago - The Department of Human Genetics			
2. Address 1 920 E. 58th Street			
Address 2 5th Floor			
3. City Chicago	State/Province IL	Country USA	Postal code 60637
4. Type of business University - Health Care		5. Job title Research Assistant	
6. Start date 07/01/2002	7. End date 07/01/2003	8. Number of hours worked per week 10-15	
9. Job details (duties performed, use of tools, machines, equipment, skills, qualifications, certifications, licenses, etc. Include the phone number of the employer and the name of the alien's supervisor.) Researched texts on calcium channel functions and defects in epileptic brain cells. Designed primers and run Polymerase Chain Reactions on brain cells obtained from Pediatric Epilepsy Center.			

c. Job 3

1. Employer name			
2. Address 1			
Address 2			
3. City	State/Province	Country	Postal code
4. Type of business		5. Job title	
6. Start date	7. End date	8. Number of hours worked per week	

OMB Approval: 1205-0451
Expiration Date: 03/31/2008

Application for Permanent Employment Certification

ETA Form 9089
U.S. Department of Labor**K. Alien Work Experience Continued**

9. Job details (duties performed, use of tools, machines, equipment, skills, qualifications, certifications, licenses, etc. Include the phone number of the employer and the name of the alien's supervisor.)

Researched texts on calcium channel functions and defects in epileptic brain cells. Designed primers and run Polymerase Chain Reactions on brain cells obtained from Pediatric Epilepsy Center.

L. Alien Declaration

I declare under penalty of perjury that Sections J and K are true and correct. I understand that to knowingly furnish false information in the preparation of this form and any supplement thereto or to aid, abet, or counsel another to do so is a federal offense punishable by a fine or imprisonment up to five years or both under 18 U.S.C. §§ 2 and 1001. Other penalties apply as well to fraud or misuse of ETA immigration documents and to perjury with respect to such documents under 18 U.S.C. §§ 1546 and 1621.

In addition, I further declare under penalty of perjury that I intend to accept the position offered in Section H of this application if a labor certification is approved and I am granted a visa or an adjustment of status based on this application.

1. Alien's last name MARLER	First name Seoan	Full middle name
2. Signature MARLER	Date signed 10/11/07	

Note – The signature and date signed do not have to be filled out when electronically submitting to the Department of Labor for processing, but must be complete when submitting by mail. If the application is submitted electronically, any resulting certification MUST be signed *immediately upon receipt* from DOL before it can be submitted to USCIS for final processing.

M. Declaration of Preparer

1. Was the application completed by the employer? If No, you must complete this section.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
---	------------------------------	--

I hereby certify that I have prepared this application at the direct request of the employer listed in Section C and that to the best of my knowledge the information contained herein is true and correct. I understand that to knowingly furnish false information in the preparation of this form and any supplement thereto or to aid, abet, or counsel another to do so is a federal offense punishable by a fine, imprisonment up to five years or both under 18 U.S.C. §§ 2 and 1001. Other penalties apply as well to fraud or misuse of ETA immigration documents and to perjury with respect to such documents under 18 U.S.C. §§ 1546 and 1621.

2. Preparer's last name CARPENTER	First name Robert	Middle initial T.
3. Title Attorney		
4. E-mail address rcarpenter@carpenterandcapt.com		
5. Signature CARPENTER	Date signed 10/17/07	

Note – The signature and date signed do not have to be filled out when electronically submitting to the Department of Labor for processing, but must be complete when submitting by mail. If the application is submitted electronically, any resulting certification MUST be signed *immediately upon receipt* from DOL before it can be submitted to USCIS for final processing.

OMB Approval: 1205-0451
 Expiration Date: 03/31/2008

Application for Permanent Employment Certification

ETA Form 9089
 U.S. Department of Labor



N. Employer Declaration

By virtue of my signature below, I **HEREBY CERTIFY** the following conditions of employment:

1. The offered wage equals or exceeds the prevailing wage and I will pay at least the prevailing wage.
2. The wage is not based on commissions, bonuses or other incentives, unless I guarantees a wage paid on a weekly, bi-weekly, or monthly basis that equals or exceeds the prevailing wage.
3. I have enough funds available to pay the wage or salary offered the alien.
4. I will be able to place the alien on the payroll on or before the date of the alien's proposed entrance into the United States.
5. The job opportunity does not involve unlawful discrimination by race, creed, color, national origin, age, sex, religion, handicap, or citizenship.
6. The job opportunity is not:
 - a. Vacant because the former occupant is on strike or is being locked out in the course of a labor dispute involving a work stoppage; or
 - b. At issue in a labor dispute involving a work stoppage.
7. The job opportunity's terms, conditions, and occupational environment are not contrary to Federal, state or local law.
8. The job opportunity has been and is clearly open to any U.S. worker.
9. The U.S. workers who applied for the job opportunity were rejected for lawful job-related reasons.
10. The job opportunity is for full-time, permanent employment for an employer other than the alien.

I **hereby designate** the agent or attorney identified in section E (if any) to represent me for the purpose of labor certification and, by virtue of my signature in Block 3 below, I **take full responsibility** for the accuracy of any representations made by my agent or attorney.

I **declare** under penalty of perjury that I have read and reviewed this application and that to the best of my knowledge the information contained herein is true and accurate. *I understand that to knowingly furnish false information in the preparation of this form and any supplement thereto or to aid, abet, or counsel another to do so is a federal offense punishable by a fine or imprisonment up to five years or both under 18 U.S.C. §§ 2 and 1001. Other penalties apply as well to fraud or misuse of ETA immigration documents and to perjury with respect to such documents under 18 U.S.C. §§ 1546 and 1621.*

1. Last name SNIDER	First name Lisa	Middle initial
2. Title Executive Administrator / Human Resources		
3. Signature SNIDER	Date signed 10/1/07	

Note – The signature and date signed do not have to be filled out when electronically submitting to the Department of Labor for processing, but must be complete when submitting by mail. If the application is submitted electronically, any resulting certification **MUST** be signed *immediately upon receipt* from DOL before it can be submitted to USCIS for final processing.

O. U.S. Government Agency Use Only

Pursuant to the provisions of Section 212 (a)(5)(A) of the Immigration and Nationality Act, as amended, I hereby certify that there are not sufficient U.S. workers available and the employment of the above will not adversely affect the wages and working conditions of workers in the U.S. similarly employed.

Signature of Certifying Officer

Date Signed

Case Number

Filing Date

OMB Approval: 1205-0451
 Expiration Date: 03/31/2008

Application for Permanent Employment Certification

ETA Form 9089

U.S. Department of Labor



P. OMB Information

Paperwork Reduction Act Information Control Number 1205-0451

Persons are not required to respond to this collection of information unless it displays a currently valid OMB control number.

Respondent's reply to these reporting requirements is required to obtain the benefits of permanent employment certification (Immigration and Nationality Act, Section 212(a)(5)). Public reporting burden for this collection of information is estimated to average 1¼ hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate to the Division of Foreign Labor Certification * U.S. Department of Labor * Room C4312 * 200 Constitution Ave., NW * Washington, DC * 20210.

Do NOT send the completed application to this address.

Q. Privacy Statement Information

In accordance with the Privacy Act of 1974, as amended (5 U.S.C. 552a), you are hereby notified that the information provided herein is protected under the Privacy Act. The Department of Labor (Department or DOL) maintains a System of Records titled Employer Application and Attestation File for Permanent and Temporary Alien Workers (DOL/ETA-7) that includes this record.

Under routine uses for this system of records, case files developed in processing labor certification applications, labor condition applications, or labor attestations may be released as follows: in connection with appeals of denials before the DOL Office of Administrative Law Judges and Federal courts, records may be released to the employers that filed such applications, their representatives, to named alien beneficiaries or their representatives, and to the DOL Office of Administrative Law Judges and Federal courts; and in connection with administering and enforcing immigration laws and regulations, records may be released to such agencies as the DOL Office of Inspector General, Employment Standards Administration, the Department of Homeland Security, and the Department of State.

Further relevant disclosures may be made in accordance with the Privacy Act and under the following circumstances: in connection with federal litigation; for law enforcement purposes; to authorized parent locator persons under Pub. L. 93-647; to an information source or public authority in connection with personnel, security clearance, procurement, or benefit-related matters; to a contractor or their employees, grantees or their employees, consultants, or volunteers who have been engaged to assist the agency in the performance of Federal activities; for Federal debt collection purposes; to the Office of Management and Budget in connection with its legislative review, coordination, and clearance activities; to a Member of Congress or their staff in response to an inquiry of the Congressional office made at the written request of the subject of the record; in connection with records management; and to the news media and the public when a matter under investigation becomes public knowledge, the Solicitor of Labor determines the disclosure is necessary to preserve confidence in the integrity of the Department, or the Solicitor of Labor determines that a legitimate public interest exists in the disclosure of information, unless the Solicitor of Labor determines that disclosure would constitute an unwarranted invasion of personal privacy.



University of Chicago
Division of Biological Sciences
Organismal Biology & Anatomy

1027 East 57th Street Room A107, Chicago, IL 60637
Phone: 773-702-8089, Fax: 773-702-0037
Email: lsnider@uchicago.edu

July 25, 2007

U.S. CIS
Nebraska Service Center
850 "S" Street
P.O. Box 87140
Lincoln, NE 68501-7140

Re: Concurrent I-140/I-485 Petition

**Petitioner: THE UNIVERSITY OF CHICAGO – Department of Organismal
Biology & Anatomy**

Beneficiary: MARLER, SEOAN

Dear Sir or Madam,

This letter is submitted in support of the petition of The University of Chicago, Department of Organismal Biology & Anatomy on behalf of Ms. Seoan Marler for her lawful permanent residency. Ms. Marler will serve as the Clinical Research Technologist with our department.

The Petitioner

The University of Chicago is a non-profit higher education institute that conducts teaching, research and service. The Department of Organismal Biology and Anatomy has projects in organismal and evolutionary biology with strong emphasis in biomechanics, developmental biology, ecological and molecular physiology, neurobiology and computational neurobiology.

The Position Offered

Ms. Marler is being offered the position of Clinical Research Technologist. In this role, Ms. Marler will conduct laboratory research and analyze findings in a project investigating epileptogenesis. This involves that she perform patch, sharp and extracellular electrophysiology of human and mouse tissue. Ms. Marler will be responsible for EEG data collection in adults and children, and quantitative analysis using nonlinear systems tools. As such, she will use Axoclamp, Igor, and Matlab softwares. In addition, Ms. Marler will maintain organotypic brain culture and tissue samples, and perform survival surgery.



University of Chicago
Division of Biological Sciences
Organismal Biology & Anatomy

1027 East 57th Street Room A107, Chicago, IL 60637
Phone: 773-702-8089, Fax: 773-702-0037
Email: lsnyder@uchicago.edu

The Beneficiary

Ms. Marler is an important addition to our department. Her education and substantial practical experience in clinical research uniquely qualifies her as the perfect candidate for this position. In 2004, Ms. Marler received Bachelor's degrees in Economics and Biological Sciences. Since 2001, she has served as a Research Assistant at the Pediatric Epilepsy Center, where she analyzed EEG recordings from pediatric patients. Ms. Marler also served as a Research Assistant for the Department of Human Genetics from July 2002 to July 2003.

Your favorable consideration of our I-140 Immigrant Petition for Alien Worker for Ms. Marler would be greatly appreciated. Should you require additional information, please do not hesitate to contact me directly, or Robert Carpenter of Carpenter & Capt, Chartered at (312) 803-5110. Your attention and professionalism are appreciated in advance.

Sincerely,

A handwritten signature in cursive script, reading "Lisa Snider", written in dark ink.

Lisa Snider
Executive Administrator
The University of Chicago

David M. Frim, M.D., Ph.D.
Associate Professor of Surgery
Chief, Pediatric Neurosurgery
Director, Residency Training Program
in Neurosurgery



5841 South Maryland Avenue, MC 4066
Chicago, Illinois 60637
tel 773 702 2475
fax 773 702 5234
dfrim@peds.bsd.uchicago.edu

The University of Chicago

July 28, 2007

United State CIS
Nebraska Service Center
850 'S' Street
P.O. Box 87140
Lincoln, NE 68501-7140

08CV3077 PH
JUDGE COAR
MAGISTRATE JUDGE ASHMAN

RE: MARLER, SEOAN
University of Chicago EB-2 Petition

To Whom It May Concern:

This letter is to support the University of Chicago application on behalf of Seoan Marler, an employee, who possesses exceptional ability in the area of science. This letter will give a full review of my ability to review her talent, current work and research, followed by an explanation of what Ms. Marler is able to do in the course of her work and the potential for further contribution.

My position at the University of Chicago Children's Hospital, is Chief, Pediatric Surgery, where I supervise the pediatric neurosurgical enterprise of the Children's Hospital. This entails performing the Pediatric Epilepsy Surgery, collaborating with those scientists who are involved in pediatric epilepsy care. My own research involves hydrocephalus and congenital anomalies, and is funded by The National Institute of Health. In this capacity I have evaluated, employed, and mentored a great number of trainees over the years. I believe it is this background knowledge and experience that allows me to evaluate Ms. Marler.

Ms. Marler earned her Bachelor Degree in Biological Science, with a specialization in Neurosciences; she also has a Bachelor of Arts in Economics from the University of Chicago. She began working in the Pediatric Epilepsy Center, a constituent program of the Pediatric Neurosciences Center, which was involved with the Neurosurgery Program in 2001. She worked at the time as an EEG technician and a part-time research assistant. An EEG technician works to place electrodes in on the scalp of a child undergoing EEG monitoring for the diagnosis and localization of epileptic seizures. This is a critical step in this process of characterization of a seizure disorder and seizure location, as certainly a plan of treatment will be dependent upon those variables. In our Epilepsy Program, the patient may stay up to one week for long-term monitoring and will need to be monitored throughout by the EEG technicians. Upon characterization of the seizures, some patients may be appropriate for a surgical procedure to implant electrodes directly on the suspicious part of the brain cortex in order to potentially diagnose an area that may be removed surgically as the ultimate treatment of the epilepsy. To map the focal point of the seizures, it is necessary to utilize electrodes implanted neurosurgically on the brain surface. Simultaneous EEG records after the surgery to place the electrodes on the brain are also obtained from scalp electrodes. The data garnered from this maneuver can be interpreted by our Pediatric Neuromedical Epilepsy Team to guide our Neurosurgery Team in removing the part of the brain generating the epilepsy.

RE: MARLER, SEOAN
University of Chicago EB-2 Petition

In the course of this critical treatment, a great deal of potentially important research data is generated by the simultaneous recordings of EEG on the brain and the scalp. One question facing our team was whether there was a significant difference in mathematical analysis of the recordings from the intracranial and extracranial electrodes. Another research question is the reliability of the extracranial recordings. This is a critical question for epilepsy treatment, as the question of how valid is the capturing of surface electrode data remains open. The mathematical project in which Ms. Marler was involved used nonlinear systems tools to provide a model showing that the extracranial records were precise enough for patients who are not fit for resective surgery could also benefit without intracranial implantation.

Another critical question that has been investigated by our Pediatric Epilepsy Team is that of whether there are changes in the spectral analysis of the EEG recordings which could lead us to be able to predict the onset of a seizure. The main focus on seizures has usually been how to stop them, and there exist many pharmacological agents as well as peripheral nerve stimulator devices to treat the problem. However, there are many classifications whose seizures remain intractable. It is in these patients for whom prediction of seizure onset would be of the greatest value, because seizure treatment by prevention would be possible. The laboratory data from the team that collaborated with Ms. Marler, found that there were changes in the interictal activity, the activity between seizures, in the EEG records when comparisons are made between epilepsy patients and normal volunteers. Interestingly enough, abnormalities were also found in the EEG recordings and they applied to the brain not involved in seizure generation. This study remains ongoing and future directions include the monitoring of seizure predictions in patients on various antiepileptic drugs.

A project more specifically involving Ms. Marler involves the collection of human brain tissue from the resective epilepsy surgeries that we perform. The resected brain needs to be meticulously transported in artificial cerebrospinal fluid that is oxygenated. It is then processed into 400 to 600 micron slices that need to be precisely cared for before they can be analyzed for cellular activity. Many parameters, including the monitoring of pharmacologic agents, chemical ions, and manipulation of various other parameters, can affect the seizure-generating tissue in the culture environment. At some point, Ms. Marler's work may allow us to use this model to develop a novel treatment for epilepsy based on successful approaches in ex-vivo tissue analysis.

Ms. Marler has also in a separate project developed a seizure model using organotypic culture slices from the mouse neocortex. When cultured, ex-vivo slices of mouse neocortex become excitable, and can be a model for epileptogenesis. By studying these slices, Ms. Marler should be able to look for intervention strategies to arrest or impede the epileptogenesis. An example is the enzyme COX-2, which is regulated in this process of epileptogenesis. Utilizing an inhibitor of that enzyme, the ability for these cultures to develop into epilepsy-generating brain can be inhibited.

In an additional project, Ms. Marler had been collaborating with members of our Brain Tumor Center to work on the epilepsy that occurs around malignant brain tumors. This is based on the generation of antisense RNA probes to try to inhibit up regulation of specific substances in the brain around the tumor. One potential outcome from this project is to be able to slow down or eliminate proliferation of these malignant tumors. A variety of difficult to master techniques are being employed by Ms. Marler to further this research utilizing both cultured tissue and engineered cell lines. These approaches can be adapted both to epilepsy prevention and maybe even tumor prevention in itself.

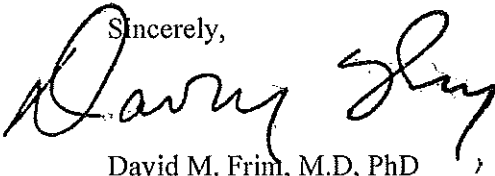
RE: MARLER, SEOAN
University of Chicago EB-2 Petition

It is my belief that Ms. Marler's involvement in the various research projects that are being developed and are ongoing in our Pediatric Epilepsy Center is significant. Her projects have been creative and the techniques that she has employed are examples of special skills and talent. She is certainly an integral part of the research team that has been built here at the hospital and the University. These many talents as well as her enthusiastic and energetic work habits predict that her contribution to neuroscience research and epilepsy research in particular over the coming years will be of very high impact.

I am hoping that she will be allowed to continue this work here in the United States because of the exceptional possibilities for future treatment options based on her contributions.

I would be happy to discuss Ms. Marler's contributions to our research effort at any time in the future.

Sincerely,

A handwritten signature in black ink, appearing to read "David M. Frim", written in a cursive style.

David M. Frim, M.D, PhD

CURRICULUM VITAE

Name: David Martin Frim

Address: Section of Neurosurgery, MC 4066
The University of Chicago Hospitals
5841 South Maryland
Chicago, Illinois 60637
Ph: (773) 702-2475 FAX: (773) 702-5234
E-mail: dfrim@peds.bsd.uchicago.edu

Date of Birth: March 14, 1960

Place of Birth: Boston, Massachusetts

Education:

- | | |
|------|--|
| 1981 | A.B. Harvard College, Cambridge, Massachusetts; <i>magna cum laude</i> ,
Biochemical Sciences |
| 1986 | A.M. Physiology Department, Division of Medical Sciences,
Harvard Graduate School of Arts and Sciences, Cambridge,
Massachusetts |
| 1988 | M.D. Harvard Medical School, Boston, Massachusetts |
| | Ph.D. Program in Neuroscience, Division of Medical Sciences,
Harvard Graduate School of Arts and Sciences, Cambridge,
Massachusetts; Title: "Studies in the Structure and
Regulation of the mRNA Species Encoding Corticotropin
Releasing Hormone and Vasopressin" |

Post-graduate Training:

- | | |
|-----------|---|
| 1988-1989 | Internship in General Surgery, Massachusetts General Hospital,
Boston, Massachusetts |
| 1989-1994 | Residency in Neurosurgery, Massachusetts General Hospital,
Boston, Massachusetts |
| 1991-1993 | Postdoctoral Fellowship, Neuroregeneration Laboratory, McLean Hospital, |

David M. Frim page 2

Belmont, Massachusetts; Neurogenetics Laboratory,
Massachusetts General Hospital, Boston, Massachusetts

1995-1996 Shillito Neurosurgical Fellowship in Pediatric Neurosurgery,
Children's Hospital, Boston, Massachusetts

Academic Appointments:

1988-1996 Clinical Fellow in Surgery, Harvard Medical School, Boston, Massachusetts

1991-1993 Research Fellow in Molecular Biology, McLean Hospital,
Harvard Medical School, Belmont, Massachusetts

1996-1997 Assistant Professor of Surgery (Neurosurgery), Biological Sciences Division,
The University of Chicago, Chicago, Illinois

1997-2003 Assistant Professor of Surgery and Pediatrics, Biological Sciences Division, The
University of Chicago, Chicago, Illinois

2003- Associate Professor of Surgery and Pediatrics, Biological Sciences Division, The
University of Chicago, Chicago, Illinois

2005- Director, Residency Training Program in Neurological Surgery, The University of
Chicago

Hospital Appointments:

1994-1995 Assistant in Neurosurgery, Massachusetts General Hospital, Boston,
Massachusetts

1995-1996 Active Staff, Clinical Neurosurgery, Children's Hospital, Boston, Massachusetts

1996 Active Staff, Surgery (Neurosurgery), Brigham and Women's Hospital,
Boston, Massachusetts

1996- Active Staff, Surgery (Neurosurgery), The University of Chicago Hospitals,
Chicago, Illinois

1996- Chief, Pediatric Neurosurgery, The University of Chicago Children's Hospital,
Chicago, Illinois

David M. Frim page 3

1997	Active Staff, Neurosurgery, Shriner's Hospital for Crippled Children, Chicago, Illinois
1997-	Active Staff, Surgery (Neurosurgery), Louis A. Weiss Memorial Hospital, Chicago, Illinois
1998-	Active Staff, Surgery (Neurosurgery), Illinois Masonic Medical Center, Chicago, Illinois
2006-	Surgical Director and Interim Medical Director, The University of Chicago Comer Children's Hospital Pediatric Neurosciences Center

Hospital and University Committee Assignments

1995-6	Clinical Protocol Guidelines Steering Committee, Neurosurgery; Children's Hospital, Boston
1997	Information Services Users Group, The University of Chicago Hospitals
1997-1998	Surgery Department Website Committee, The University of Chicago Hospitals
1998-	General Operating Room Operations Committee, The University of Chicago Medical Center
1997	University of Chicago Biological Sciences Division, Search Committee for Section Chief of Pediatric Neurology
1999	University of Chicago Children's Hospital Critical Care Task Force
1999	University of Chicago Dept. of Surgery Professees/UCPG Communications and Liason Committee
2000	University of Chicago Biological Sciences Division, Radiology Department Chairman Search Committee
2002	University of Chicago Department of Surgery, Advisory Committee on Credentials for Advanced Endoscopy
2004	University of Chicago Department of Surgery, Advisory Search Committee, Plastic Surgery Section Chief
2005	Volunteer Grant Application Mentor, Biological Sciences Division, University of Chicago
2005	Comer Operating Room Operations Committee, The University of Chicago Children's Hospital
2005-	Member, Graduate Medical Education Committee, The University of Chicago

David M. Frim page 4

2006	University of Chicago Biological Sciences Division, Search Committee for Section Chief of Pediatric Neurology
2006	Member, University of Chicago Neurosciences Taskforce
2006	Member, Committee to Advise the Provost and President on the BSD Deanship, The University of Chicago (by Faculty Election)
2006-	Department of Surgery, The University of Chicago, Medical Liability Risk Reduction Committee
2006 -2009	Professional Liability Risk Reduction sub-committee of the University of Chicago Practice Plan Executive Committee

Licensure:

1989	Diplomate, National Board of Medical Examiners
1994-	Medical License, Commonwealth of Massachusetts, License #80157
1996-	Medical License, State of Illinois, License #036-093030
1998	Certification, The American Board of Neurological Surgery, #98093
1999	Certification, The American Board of Pediatric Neurological Surgery, #99-0137

Awards:

1977	Harvard National Scholar
1992	Kenneth R. Shulman Award, Pediatric Section of the American Association of Neurological Surgeons
1993	Young Neurosurgeons Award, World Federation of Neurosurgical Societies
1993	Second Place, Codman Prize for Young Pediatric Neurosurgeons
1994	Neurosurgery Platform Speaker, Stanley Cobb Resident Assembly, The Boston Society of Neurology and Psychiatry

David M. Frim page 5

- 1995 Von L. Meyer Fellowship Fund Award, Children's Hospital,
Boston, Massachusetts
- 1998 The Louis Block Fund Award, Biological Sciences Division,
The University of Chicago
- 2001-2003, *Top Doctors: Chicago Metro Area*, Neurological Surgery
2005
- 2002- Elected to Society of Medical Educators (Honor Society), The Pritzker
School of Medicine, The University of Chicago
- 2005 *America's Top Doctors for Cancer*, Castle Connelly Guide
- 2004, 2005 *America's Top Physicians*, Consumer's Research Council of America
- 2005, 2006 *Chicago's Top doctors: Neurological Surgery*, Chicago Magazine
- 2007 *America's Top Surgeons*, Consumer's Research Council of America

Memberships:

Professional/Academic

- 1982- American Medical Association
- 1983- Massachusetts Medical Society
- 1983- Union of Concerned Scientists
- 1992 Society for Neuroscience
- 1996- Illinois Neurosurgical Society
- 1997- American Association of Neurological Surgeons
- 1997- Chicago Medical Society
- 1997- Illinois State Medical Society
- 1997- Hydrocephalus Association
- 1997- Joint Section on Pediatric Neurological Surgery, American Association of
Neurological Surgeons and Congress of Neurological Surgeons
- 1998- Congress of Neurological Surgeons
- 1998- Pituitary Society

David M. Frim page 6

1998-2000 American College of Surgeons (Associate Fellow)
 1998- National Tuberous Sclerosis Association, Clinical Care Advisory Board
 2000- Fellow, American Academy of Pediatrics
 2000- American Society of Pediatric Neurosurgeons
 2000- Fellow, American College of Surgeons
 2001 Pituitary Network Association, Lifetime Member
 2003- Society of University Neurosurgeons
 2006- Society of Neurological Surgeons

Industry

1999 – 2003 Case Reviewer, Hines and Associates, Inc., Elgin, IL
 2003 - 2006 Member, Senior Advisory Board, Medtronic Neurosurgical

Leadership/Committee Service, Scientific/Medical Organizations

1983 Member, Committee on Medicine and Religion, Massachusetts Medical society
 2000-2001 Member, Scientific Program Committee, Annual Meeting, Congress of Neurological Surgeons
 2002- Neurological Surgery Section Liason to Illinois Chapter, American Academy of Pediatrics
 2002- Extramural Writing Committee, American Board of Neurological Surgery
 2003- Committee for the Enhancement of Neurosurgical Research, Congress of Neurological Surgeons
 2004-2005 Member, Steering Committee, National Institutes of Health Consensus Conference on Hydrocephalus Research: “Hydrocephalus: Myths, New Facts, Clear Directions”, September, 2005.
 2006 Member, Annual Meeting Committee, Rachidian Society

Review Sections and Editorial Boards

Expert Opinion on Investigational Drugs, Ad hoc reviewer
Cambridge University Press, Ad hoc reviewer of manuscript proposals
National Institutes of Health, Center for Scientific Review Special Emphasis Panel, ZRG1-BDCN-6
(02), 11/99
Expert Opinion on Pharmacology, Ad hoc reviewer
National Institutes of Health, Center for Scientific Review Special Emphasis Panel, ZRG1-BDCN-1
(03), 4/00
Prospectives in Biology and Medicine, Ad hoc reviewer
National Institutes of Health, Center for Scientific Review Special Emphasis Panel, ZRG1-BDCN-6
(02), 10/00
National Institutes of Health, Center for Scientific Review Special Emphasis Panel, ZRG1-BDCN-6
(03), 12/00
Child's Nervous System, Ad hoc reviewer
National Medical Research Council, Singapore, Reviewer
Neurosurgery, Ad hoc reviewer
Pediatric Neurosurgery, Member, Editorial Board, 2002 – 2003
Journal of Gene Medicine, Ad hoc Reviewer
Pediatric Neurosurgery, Interim Editor-in-Chief, 2004
Journal of Pediatrics, Ad hoc Reviewer
Pediatric Neurosurgery, **Editor-in-Chief**, 2005 – 2009
National Institutes of Health, Center for Scientific Review Special Emphasis Panel, ZRG1-BDCN-K
18 S 7/06
Experimental Neurology, Ad hoc reviewer

Fields of Specialization:

Clinical Interests:

1. Hydrocephalus and Congenital Anomalies of the Nervous system
2. Epilepsy, Functional, and Stereotactic Neurosurgery
3. "Adult" Practice of Pediatric Neurosurgery

Basic Science Interests:

1. Hydrocephalus, Cerebrospinal Fluid Dynamics, ICP, and Neurocognition
2. Molecular Membrane Repair in the Brain
3. Neural Substrates of Injury and Protection

Peer Reviewed Articles

1. Frim, D.M. The characterization and biosynthesis of a large cell surface glycoprotein. Harvard University Honors Thesis, A.B., 1981.
2. Apelgren, K.N., Frim, D.M., Harling-Berg, C.J., Gander, P.H., Moore-Ede, M.C. Effectiveness of cyclic intragastric feeding as a circadian zeitgeber in the squirrel monkey. *Physiol Behav* 34:335-340, 1985.
3. Codington, J.F., Deak, M.R., Frim, D.M., Jeanloz, R.W. Evidence for the presence of an N-acetylactosamine-type chain in epiglycanin. *Acta Biochem Biophys* 251:47-54, 1986.
4. Frim, D.M., Emanuel, R.L., Robinson, B.G., Smas, C.M., Adler, G.K., Majzoub, J.M. Characterization and gestational regulation of preprocorticotropin releasing hormone messenger RNA in the human placenta. *J Clin Invest* 82:287-292, 1988.
5. Robinson, B.G., Emanuel, R.L., Frim, D.M., Majzoub, J.A. Glucocorticoid stimulates corticotropin releasing hormone gene expression in human placenta. *Proc Natl Acad Sci (USA)* 85:5244-5248, 1988.
6. Robinson, B.G., Frim, D.M., Schwartz, W.J., Majzoub, J.A. Vassopressin mRNA in the suprachiasmatic nuclei: daily regulation of polyadenylate tail length. *Science* 241:342-344, 1988.
7. Frim, D.M. Studies in the structure and regulation of the mRNA species encoding corticotropin releasing hormone and vasopressin. Harvard University Thesis, Ph.D., 1988.
8. Boulos, Z., Frim, D.M., Dewey, L.K., Moore-Ede, M.C. Effects of restricted feeding schedules on circadian organization in squirrel monkeys. *Physiol Behav* 45:507-515, 1989.
9. Frim, D.M., Robinson, B.G., Pasioka K.B., Majzoub, J.A. Differential regulation of corticotropin releasing hormone mRNA in the rat brain. *Am J Physiol* 258:E686-E692, 1990.
10. Adler, G.K., Smas, C.M., Fiandaca, M.J., Frim, D.M., Majzoub, J.A. Regulated expression of the human corticotropin releasing hormone gene by cyclic AMP. *Mol Cell Endocrinol* 70:165-174, 1990.
11. Frim, D.M., Jones, D., Goumnerova, L. Development of symptomatic Chiari malformation in a child with craniofacial dysmorphism. *Pediatric Neurosurgery* 16:228-231, 1990-1991.
12. Frim, D.M., Barker, F.G., II, Poletti, C.E., Hamilton, A.J. Postoperative low-dose heparin decreases thromboembolic complications in neurosurgical patients. *Pediatric Neurosurgery* 30:830-833, 1992

David M. Frim page 9

13. Frim, D.M., Ogilvy, C., Von Sattell, J.-P., Chapman, P.H. Is intracerebral schwannoma a developmental tumor of children and young adults?: *Pediatric Neurosurgery* 18:190-194, 1992.
14. Frim, D.M., Short, M.P., Rosenberg, W.S., Simpson, J., Breakefield, X.O., Isacson, O. Local protection of nerve growth factor-secreting fibroblasts against excitotoxicity in the rat striatum. *J Neurosurg* 78:267-273, 1993.
15. Frim, D.M., Uhler, T.A., Short, M.P., Ezzedine, Z.D., Klagsbrun, M., Breakefield, X.O., Isacson, O. Effects of biologically delivered NGF, BDNF, and bFGF in striatal excitotoxic lesions. *NeuroReport* 4:367-370, 1993.
16. Yee, W.M., Frim, D.M., Isacson, O. Relationships between stress protein induction and NMDA-mediated neuronal death in the entorhinal cortex. *Exp Brain Res* 94:193-202, 1993.
17. Frim, D.M., Yee, W.M., Isacson, O. NCF reduces striatal excitotoxic neuronal loss without affecting concurrent neuronal stress. *NeuroReport* 4:655-658, 1993.
18. Frim, D.M., Simpson, J., Uhler, T.A., Bossi, S.R., Short, M.P., Breakefield, X.O., Isacson, O. Striatal degeneration induced by mitochondrial blockade is prevented by biologically delivered NGF. *J Neurosci Res* 35:452-458, 1993.
19. Andersen, J.K., Frim, D.M., Isacson, O., Breakefield, X.O. Herpes-virus mediated gene delivery into the rat brain: specificity and efficiency of the neuron-specific enolase promoter. *Cell Mol Neurobiol* 13: 503-515, 1993.
20. Andersen, J.K., Frim, D.M., Isacson, O., Breakefield, X.O. Transgenic mice over expressing monoamine oxidase B neuronally. *Movement disorders* 8:405, 1993.
21. Brownell, A.L., Hantraye, P., Wullner, U., Hamberg, L., Shoup, T., Elmalch, D.R., Frim, D.M., Brownell, G.L., Rosen, B.R., Isacson, O. *In vivo* glucose utilization, dopamine receptor binding and striatal hemodynamics in a primate model of Huntington's disease. *Exp Neurol* 125:41-51, 1994.
22. Uhler, T.A., Frim, D.M., Pakzaban, P., Isacson, O. Effects of mega-dose methylprednisolone and U-78517F on glutamate-receptor mediated toxicity in the rat neostriatum. *Neurosurgery* 34:122-128, 1994.
23. Golden J., Frim, D.M., Chapman, P.H., Vonsattel, J.-P. Marked tissue eosinophilia within organizing chronic subdural hematoma membranes. *Clin Neuropath* 13:12-16, 1994.
24. Frim, D.M., Uhler, T.A., Galpern, W., Beal, M.F., Breakefield, X.O., Isacson, O. Biologically delivered BDNF increases dopaminergic neuronal survival in a rat model of Parkinson's disease. *Proc. Natl Acad Sci USA* 91:5104-5108, 1994.

David M. Frim page 10

25. Andersen, J.K., Frim, D.M., Isacson, O., Breakefield, X.O. Catecholaminergic cell atrophy in a transgenic mouse aberrantly over expressing MAO-B in neurons. *Neurodegeneration* 3:97-109, 1994.
26. Frim, D.M., Wullner, U., Beal, M.F., Isacson, O. Mechanisms underlying NGF-mediated neuroprotection in the rat striatum. *Exp Neurology* 128:172-180, 1994.
27. Frim, D.M., Isacson, O. Neuronal protection against excitotoxicity-response. *J. Neurosurg* 79:640-641, 1993.
28. Castillo, B., del Cerro, M., Breakefield, X.O., Frim, D.M., Barnstable, C.J., Bohn, M.C. Retinal ganglion cell survival is promoted by genetically modified astrocytes designed to secrete brain-derived neurotrophic factor (BDNF). *Brain Res* 647:30-36, 1994.
29. Andersen, J.K., Frim, D.M., Isacson, O., Beal, M.F., Breakefield, X.O. Elevation of neuronal MAO-B activity in a transgenic mouse model does not increase sensitivity to the neurotoxin 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP). *Brain Res* 656:108-114, 1994.
30. Chapman, P.H., Frim, D.M. Symptomatic hydromyelia following operation for recurrent tethering of the spinal cord. *J Neurosurgery* 82:752-755, 1995.
31. Frim, D.M., Oglivy, C.S. Mutism and cerebellar dysarthria after brainstem surgery. *Neurosurgery* 36:854-857, 1995.
32. Yoshimoto, Y., Lin, Q., Collier, T.J., Frim, D.M., Breakefield, X.O., Bohn, M.C. Astrocytes retrovirally transduced with BDNF elicit behavioral improvement in a rat model of Parkinson's disease. *Brain Research* 691:25-36, 1995.
33. Frim, D.M., Padwa, B., Buckley, D., Crowell, R.M., Oglivy, C.S. Mandibular subluxation as an adjunct to exposure of the distal internal carotid artery in endarterectomy surgery: technical note. *J Neurosurg* 83:926-928, 1995.
34. Isacson, O., Frim, D.M., Galpern, W.R., Tatter, S.B., Breakefield, X.O., Schumacher, J.M. Cell-mediated delivery of neurotrophic factors and neuroprotection in the neostriatum and substantia nigra. *Rest Neurol Neurosci* 8:59-61, 1995.
35. Galpern, W.R., Frim, D.M., Tatter, S.B., Altar, C.A., Beal, M.F., Isacson, O. Cell-mediated delivery of brain-derived neurotrophic factor enhances dopamine levels in an MPP+ rat model of substantia nigra degeneration. *Cell Transplantation*, 5:225-32, 1996.
36. Frim, D.M., Wollman, L., Evans, A.B., Ojemann, R.G. Acute pulmonary edema after low-level air embolism during craniotomy. *J. Neurosurg* 85:937-940, 1996.

David M. Frim page 11

37. Frim, D.M., Zec, N., Golden, J., Scott, R.M. Immunohistochemically identifiable tissue plasminogen activator (TPA) in cavernous angioma: mechanism for rehemorrhage and lesion growth. *Pediatric Neurosurgery* 25:137-142, 1996.
38. Eskandar, E.N., Weller, S., Frim, D.M. Hydrocephalus requiring urgent external ventricular drainage in a patient with diabetic ketoacidosis and cerebral edema. *Neurosurgery* 40:836-839, 1997.
39. Frim, D.M., Goumnerova, L.C. Telemetric intraventricular pressure measurements after endoscopic third ventriculo-cisternostomy. *Neurosurgery* 41:1425-1430, 1997.
40. Park, J., Frim, D.M., Schwartz, M.S., Reidy, P., Farley, J., Black, P. McL., Scott, R.M., Goumnerova, L.C., Madsen, J.R. The use of clinical practice guidelines (CPGs) to evaluate practice and control costs in ventriculoperitoneal shunt malfunction. *Surgical Neurology* 48:536-541, 1997.
41. Goumnerova, L.C., Frim, D.M. Treatment of hydrocephalus with third ventriculocisternostomy: outcome and CSF flow patterns. *Pediatric Neurosurgery* 27:149-152, 1998.
42. Munshi, I., Lathrop, D., Madsen, J.R., Frim, D.M. Intraventricular pressure in ventriculopleural shunts: a telemetric study. *Pediatric Neurosurgery* 28:67-69, 1998.
43. Citow, J.S., Munshi, I., Chang-Stroman, T., Sullivan, C., Frim, D.M. C2/3 instability in a child with Down's syndrome: case report and discussion. *Pediatric Neurosurgery*, 28:143-146, 1998.
44. Curry, D.J., Frim, D.M. Delayed repair of open depressed skull fracture. *Pediatric Neurosurgery* 31:294-297, 1999.
45. Kang, U.K., Frim, D.M. Gene therapy for Parkinson's disease: review and update. *Expert Opinion on Investigational Drugs* 8:1551-1564, 1999.
46. Yamini, B., Goumnerova, L.G., Frim, D.M. Endoscopic approach to non-communicating fluid spaces in the shunted patient. *Pediatric Neurosurgery* 31:237-241, 1999.
47. Nadig, M., Munshi, I., Short, M.P., Tonsgard, J., Sullivan, C., Frim, D.M. A child with neurofibromatosis type I and a lumbar epidural arteriovenous malformation. *J Child Neurol* 15:273-275, 2000.
48. Munshi, I., Frim, D., Stine-Reyes, R., Weir, B., Hekmatpanah, J., Brown, F. Effects of posterior fossa decompression with and without duroplasty on Chiari malformation associated syringomyelia. *Neurosurgery* 46:1384-1390, 2000.

49. Frim, D.M., Goumnerova, L.C. In vivo intracranial pressure dynamics of cerebrospinal fluid shunting systems monitored telemetrically in patients with shunted hydrocephalus. *J Neurosurg* 92:927-932, 2000.
50. Nakamura, K., Bindokas, V.P., Marks, J.D., Wright, D., Frim, D., Miller, R.J., Kang, U.J. The Selective toxicity of 1-methyl-4-phenylpyridinium to dopaminergic neurons: the role of mitochondrial complex I and reactive oxygen species revisited. *Mol Pharm* 58:271-278, 2000.
51. Papasian, N., Frim, D.M. A theoretical model of benign external hydrocephalus that predicts a predisposition towards extra-axial hemorrhage after minor head trauma. *Pediatric Neurosurgery* 33:188-193, 2000.
52. Frim, D.M., Lathrop, D. In vivo intraventricular pressure dynamics consequent to manipulations of the Codman-Medos programmable shunt valve. *Pediatric Neurosurgery* 34:73-76, 2001.
53. Frim, D.M., Munshi, I., Goumnerova, L.G.: Measurements of intraventricular pressure in a patient shunted from the ventricle to the internal jugular vein against the direction of flow (the El-Shafei shunt). *Child's Nerv Sys*, 17:379-381, 2001.
54. Frim, D.M., Lathrop, D., Chwals, W.J. Intraventricular pressure dynamics in ventriculocholecystic shunting: a telemetric study. *Pediatric Neurosurgery* 33:237-242, 2001.
55. Le, H., Chico, M., Hecox, K., Frim, D.M. Interscapular placement of vagal nerve stimulator pulse generator for prevention of wound tampering: technical note. *Pediatric Neurosurgery*, 36:164-166, 2002.
56. Le, H.N. Frim, D.M. Gene Therapy for Parkinson's Disease. *Expert Opinion in Biological Therapeutics* 2:151-161, 2002.
57. Le, H.N. Frim, D.M. Lumboperitoneal shunting as a treatment for slit ventricle syndrome. *Pediatric Neurosurgery* 36:178-182, 2002.
58. Zhang X, van Drongelen W, Hecox K, Towle VL, Frim DM, McGee A, Lian J, He B: "Cortical imaging of interictal epileptiform activity using an inhomogeneous spherical head model," *Int. J. of Bioelectromagnetism*, 4(2): 259-260, 2002.
59. Jackson, C.C., Chwals, W.J., Frim, D.M. A single-incision laparoscopic technique for retrieval and replacement of disconnected ventriculoperitoneal shunt tubing found in the peritoneum. *Pediatric Neurosurgery* 36:175-177, 2002.
60. Lee, M.C., Frank, J., Kahana, M., Tonsgard, J. Frim, D.M. Decompressive hemi-craniectomy in a 6 year old after unilateral hemispheric stroke: Case report and review. *Pediatric Neurosurgery* 38:181-185, 2003.

61. Macdonald, R. L., Amidei, C., Baron, J., Weir, B., Brown, F., Erickson, R.K., Hekmatpanah, J., Frim, D. Randomized, pilot study of intermittent pneumatic compression devices plus dalteparin versus intermittent pneumatic compression devices plus heparin for prevention of venous thromboembolism in patients undergoing craniotomy. *Surgical Neurology* 59:363-372, 2003.
62. Rosen, D. S., Wollman, R., Frim, D.M. Recurrence of symptoms after Chiari decompression and duraplasty with non-autologous graft material. *Pediatric Neurosurgery* 38:186-190, 2003.
63. Zhang, X., van Drongelen, W., Hecox, K., Towle, V.L., Frim, D.M., McGee, A.B., Lian, J., He, B. Localization of epileptic foci by means of cortical imaging using a spherical head model. *Neurocomputing* 52-54: 977-982, 2003
64. Zhang X, van Drongelen W, Hecox K, Towle VL, Frim DM, McGee A, & He B: "High Resolution EEG: Cortical Potential Imaging of Interictal Spikes," *Clinical Neurophysiology*, 114:1963-1973, 2003
65. Van Drongelen, W., Nayak, S., Frim, D.M., Kohrman, M.H., Towle, V.L., Lee, H.C., McGee, A.B., Chico, M.S., Hecox, K.E. Seizure detection in pediatric epilepsy: use of Kolmogorov entropy. *Pediatric Neurology* 207-213, 2004.
66. Frim, D.M., Wright, D., Curry, D., Cromie, W., Lee, R., Kang, U.-J. Surfactant Poloxamer-188 protects against glutamate toxicity in the rat brain. *NeuroReport*, 15:171-174, 2004.
67. Curry, D.J., Wright, D.A., Lee, R.C., Kang, U.J., Frim, D.M. Surfactant Poloxamer 188-related decreases in inflammation and tissue damage after experimental brain injury in rats. *J Neurosurg:Pediatrics*, 101:91-96, 2004.
68. Zhang, X., van Drongelen, W., Hecox, K.E., Towle, V.L., Frim, D.M., McGee, A.B., He, B. High resolution EEG: cortical potential imaging of interictal spikes. *Clinical Neurophysiology* 114:1963-73, 2004.
69. Sikorski, C.W., Yamini, B., Frim, D.M. Endoscopic cyst fenestration: outcomes in children one year of age or less. *Pediatric Neurosurgery* 40:59-63, 2004.
70. Yamini, B., Refai, D., Rubin, C.M., Frim, D.M. Endoscopic initial management of pineal region tumors with associated hydrocephalus: clinical series and literature review. *J Neurosurg:Pediatrics* 100:427-441, 2004.
71. Lee, M.C., Yamini, B., Frim, D.M. Pseudotumor Cerebri Patients Shunted from the Cisterna Magna: Clinical Course and Telemetric Intracranial Pressure Data. *Neurosurgery* 55:1094-1099, 2004. Curry, D.J., Wright, D.A., Lee, R.C., Kang, U.-J, Frim, D.M. Poloxamer 188 Volumetrically Decreases Neuronal Loss in the Rat in a Time Dependent Manner. *Neurosurgery* 55:943-949 2004.

David M. Frim page 14

72. Khorasani , L., Sikorski, C.W., Frim, D.M. Lumbar CSF Shunting Preferentially Drains the Cerebral Subarachnoid over the Ventricular Spaces: Implications for the treatment of Slit Ventricle Syndrome. *Pediatric Neurosurgery* 40:270-276, 2004.
73. Lai, Y., van Drongelen, W., ding, L., Hecox, K.E., Towle, V.L., Frim, D.M., He, B. Estimation of in vivo human brain-to-skull conductivity ratio from simultaneous extra- and intra-cranial electrical potential recordings. *Clinical Neurophysiology* 116: 456-465, 2005.
74. Fagan , L.H., Ferguson, S., Yassari, R., Frim, D.M.. The Chiari-pseudotumor cerebri syndrome: symptom recurrence after decompressive surgery for Chiari malformation type 1. *Pediatric Neurosurgery* 42:14-19, 2006.
75. Musleh, W., Hecox, K.E., Kohrman, M., Chico, M., Frim, D.M. Low Incidence of Subdural Grid Related Complications in Prolonged Pediatric EEG Monitoring . *Pediatric Neurosurgery* 42:284-287, 2006.
76. Zhang, Y., Ding, L., van Drongelen, W., Hecox, K., Frim, D.M., He, B. A cortical potential imaging study from simultaneous extra- and intracranial electrical recordings by means of the finite element method. *Neuroimage* 31:1513-24, 2006.
77. Chkhenkeli, S.A., Towle, V.L. Lortkipanidze, G.S., Spire, J.-P., Bregvadze, E.S., Hunter, J.D., Kohrman, M., Frim, D.M. Mutually suppressive interrelations of symmetric epileptic foci in bitemporal epilepsy and their inhibitory stimulation. *Clinical Neurology and Neurosurgery* 109:7-22, 2007.
78. Cadichon, S.B., Lee, H.M., Wright, D.A., Curry, D.J., Kang, U.-J., Frim, D.M., The surfactant poloxamer, p-188, protects against hemorrhage-associated neuronal loss in the rat brain. *J Neurosurg: Pediatrics* 106:36-40, 2007.
79. Sikorski , C.W., Iteld, L., McKinnon, M., Yamini, B., Frim, D.M. Correction of Sagittal Craniosynostosis Using a Novel Parietal Bone Fixation Technique: Results over a Ten Year Period. *Pediatric Neurosurgery* 43:19-24, 2007.
80. Sikorski, C., Rosen, D.S., Frim, D.M. Adjustable shunt valve reprogramming at home: safety and feasibility. *Neurosurgery*, 60:333-337, 2007.
81. Lai Y, van Drongelen W, Hecox K, Frim D, Kohrman M, and He B: Cortical Activation Mapping of Epileptiform Activity Derived from Interictal ECoG Spikes, *Epilepsia* 48:305-314, 2007.
82. Bhayani, M.K., MacCracken, E., Frim, D., Baroody F.M. Prolonged Cricopharyngeal Muscle Spasm After Resection of The Cervical Vagus Nerve in a 15 year old. *Pediatric Neurosurgery*, in press, 2007.

David M. Frim page 15

83. Kushen, M., Frim, D.M. Placement of subdural electrode grids for seizure focus localization in patients with large arachnoid cysts: Technical note. *Neurosurgical Focus*, in press, 2007.
 84. Foster, K.A., McKinnon, M., Frim, D.M. Recurrence of Synostosis Following Surgical Repair of Craniosynostosis. *J Plastic and Reconstructive Surgery*, in press, 2007.
 85. Towle, V.L, Hunter, J.D., Edgar, C., Chkhenkeli, S.A., Castelle, M.C., Frim, D.M., Kohrman, M., Hecox, K. Frequency domain analysis of human subdural recordings. *J. Clin Neurophysiol*, in press, 2007.
 86. Ferguson, S., Michael, N., Frim, D.M. Observations regarding early failure after CSF shunt implantation. *Neurosurgical Focus*, in press, 2007.
 87. Williams, M.A., Walker, M.L., Kranz, D.A., Del Bigio, M.R., Bergsneider, M., Luciano, M.G., Kestle, J., Madsen, J., Frim, D.M., McAllister, J.P. Priorities for hydrocephalus research: report from a NIH-sponsored workshop. *J Neurosurg*, in press, 2007.
- (submitted)*
88. Frim, D.M., Yassari, R., Yamini, B. Outcome of surgery for Chiari malformation type 1 correlated with pre-operative presentation. Submitted for publication.
 89. Lacy, M., Oliveira, M., Pyykkonen, B., Hunter, S., Mottlow, D., Frim, D. Neurocognitive outcome after endoscopic third ventriculocisternostomy in patients with obstructive hydrocephalus. Submitted for publication.
 90. Pyykkonen, B., Do, T., Hunter, S.J., Lacy, M., Oliveira, M., Larson, E., Mottlow, D., Frim, D.M. Intellectual functioning in children with early shunted post-hemorrhagic hydrocephalus. Submitted for publication.
 91. Sikorski, C.W., Curry, D.J., Kahana, M., Frim, D.M. The use of pentobarbital for the management of post-operative intracranial hypertension following surgery for focal intracranial lesions in children. Submitted for Publication.

Non-Peer Reviewed Articles and Notes

1. Frim, D.M., Short, M.P., Breakefield, X.O., Isacson, O. Biological gene-product delivery to the brain: a protocol for retroviral gene transfer into cultured cells and intracerebral transplantation. *Neuroprotocols* 3:63-68, 1993.
2. Frim, D.M. Endoscope-assisted removal and repositioning of a ventricular catheter. *Outcomes* 2:3, 1996.

David M. Frim page 16

3. Rodgers, W.B., Frim, D.M., Emans, J.B. Surgery of the Spine in Myelodysplasia: an overview. *Clinical Orthopedics and Related Research* 33:19-35, 1997.
4. Frim, D.M. The use of orthotic molding helmets for positional plagiocephaly in the infant. *Ballert Briefs Orthotic and Prosthetic Newsletter* 2(6):1-3, 1997.
5. Frim, D.M. Treatment of Hydrocephalus in the 90's. *Clinical Comment* (University of Chicago), p. 10-14, July, 1997.
6. Ovsiew, F., Frim, D.M. Neurosurgery for psychiatric disorders. *J Neurol Neurosurg Psychiatry* 63:701-705, 1997.
7. Frim, D.M. Promoting a well rounded head shape. *Chicago Parent Magazine*, July, 1998.
8. Frim D.M. Craniofacial Dysmorphism. WebMD, on-line publication, 2002.
10. Frim, D.M., Editorial Note. *Pediatric Neurosurgery* 40:1, 2004

Abstracts:

- A1. Codington, J.F., Frim, D.M., Deak, M.R., Darby, D.M., Herscovics, A., Jeanloz, R.W. Evidence for a mannose containing chain in Epiglycanin. *Am Soc Biol Chem Abstr* 1510, 1984.
- A2. Codington, J.F., Deak, M.R., Frim, D.M., Linsley, K.B., Jeanloz, R.W. Three types of mannose containing chains in epiglycanin. *Proc 8th Intl Symp Glycoconjugates*, Houston, Texas, 407-408, 1985.
- A3. Frim, D.M., Boulos, Z., Moore-Ede, M.C. Restricted but unsignaled daily food availability synchronizes anticipatory behavior, but fails to entrain other circadian rhythms in the squirrel monkey. *Neuroscience Abstr* 10:504, 1983.
- A4. Frim, D.M., Majzoub, J.M. Rat corticotropin releasing hormone: cDNA cloning and sequence analysis. *Boston Area Neurosciences Group, Annual Meeting*, 1985.
- A5. Majzoub, J.A., Frim, D.M., Adler, G.K. Rat corticotropin releasing hormone: cDNA cloning and structural analysis. *Clin Res* 34:428A, 1986.
- A6. Frim, D.M., Majzoub, J.A. Corticotropin releasing hormone: messenger RNA expression in the sheep and rat hypothalamus. *Endocrine Society 68th Annual Meeting*, 1986.
- A7. Frim, D.M., Majzoub, J.A. Localization of corticotropin releasing hormone mRNA in the brain of the rat by in situ hybridization. *Neuroscience Abstr* 12:1388, 1986.

David M. Frim page 17

- A8. Frim, D.M., Emanuel, R., Smas, C., Robinson, B., Adler, G. Localization and gestational regulation of corticotropin releasing hormone messenger RNA in human placenta. Endocrine Society 69th Annual Meeting, 1987.
- A9. Frim, D.M., Robinson, B.G., Pasiaka, K.B., Majzoub, J.A. Differential tissue specific regulation of corticotropin releasing hormone mRNA in the cerebral cortex and hypothalamic paraventricular nuclear of the rat. Clin Res 36:384A, 1988.
- A10. Robinson, B., Emanuel, R., Frim, D.M., Majzoub, J. Glucocorticoid stimulates corticotropin releasing hormone gene expression in human placenta. Endocrine Society 70th Annual Meeting, 1988.
- A11. Adler, G.K., Smas, C.M., Frim, D.M., Majzoub, J. Regulation of the human corticotropin releasing hormone gene in a mouse anterior pituitary cell line via the cyclic AMP-dependent pathway. Endocrine Society 70th Annual Meeting, 1988.
- A12. Frim, S.M., Poletti, C.E., Hamilton, A.J. Occult subdural empyema presenting as chronic subdural hematoma: aggressive membranectomy reveals a high incidence of infected cavities. Am Assoc Neurol Surg Annual Meeting, 1991.
- A13. Frim, D.M., Poletti, C.E., Hamilton, A.J. Safety and efficacy of low dose heparin therapy for the prevention of pulmonary emboli in the neurosurgical patient. Congress of Neurological Surgeons Annual Meeting, Orlando, 1991.
- A14. Hamilton, A.J., Frim, D.M., Barker, F.G., Poletti, C.E. Postoperative low dose heparin decreases thromboembolic complications in neurosurgery patients. Arizona Neurosurgical Society Annual Meeting, 1991.
- A15. Breakefield, X.O., Frim, D.M., Andersen, J.K., Schumacher, J.M., Short, M.P., Rosenberg, W., Isacson, I. Growth factors for genetically engineered brain. Growth Factors, Peptides and Receptors '91, XIIth Washington International Spring Symposium, 1992.
- A16. Isacson, O., Frim, D., Rosenberg, W.S., Davar, G., Andersen, J.K., Short, M.P., Breakefield, X.O. Gene transfer and implantation of genetically engineered cells into the CNS. International Union of Biochemistry and Molecular Biology Conference: Biochemistry of Disease. Nagoya, Japan, 1992.
- A17. Frim, D.M., Oglivly, C.S., Chapman, P.H. Preoperative chemotherapy in the treatment of choroid plexus carcinoma of childhood: case reports and discussion. New England Neurosurgical Society, Spring Meeting, Waltham, MA, 1992.
- A18. Frim, D.M., Schumacher, J., Short, M.P., Breakefield, X.O., Isacson, O. Local response to intracerebral grafts of NGF-secreting fibroblasts: induction of a peroxidative enzyme. Neurosci Abstr 18:1100, 1992.

David M. Frim page 18

- A19. Yee, W.M., Frim, D.M., Bossi, S.R., Isacson, O. HSP72 and ubiquitin expression is not correlated with neuronal survival after low doses of NMDA in the rat entorhinal cortex. *Neurosci Abstr* 18:43, 1992.
- A20. Andersen, J.K., Frim, D.M., Isacson, O., Breakefield, X.O. Neuroanatomically-specific transgene expression of a neuron-specific herpes virus vector stereotactically delivered into the rat striatum. *Neurosci Abstr* 18:84, 1992.
- A21. Frim, D.M., Uhler, T.A., Fleet, C., Short, M.P., Breakefield, X.O., Isacson, O. Effects of biologically delivered neurotrophins in animal models of neural degeneration. Annual Meeting, Pediatric Section of the Am. Assoc. of Neurol. Surg., Vancouver, B.C, 1992.
- A22. Uhler, T.A., Frim, D.M., Isacson, O. Effects of mega-dose methylprednisolone and the lazardoid U-78517F on excitotoxic lesions of the rat striatum. Am Assoc Neurol Surg Ann Meeting, Boston, Massachusetts, 1993.
- A23. Brownell, A.L., Shoup, T., Wullner, U., Elmalch, D., Pakzaban, P., Hantraye, P., Frim, D.M., Brownell, G., Isacson, O. In vivo visualization o striatal transplants in a primate model of Huntington's disease. Soc. For Nuclear Medicine Ann. Meeting, Toronto, 1993.
- A24. Breakefield, X.O., Andersen, J.K., Frim, D.M., Davar, G., Bebrin, W., Coen, D., Isacson, O. Genetic manipulation of the adult nervous system. World Congress of Psychiatric Genetics Ann Meeting, New Orleans, 1993.
- A25. Frim, D.M., Uhler, T.A., Short, M.P., Breakefield, X.O., Isacson, O. Effects pf biologically delivered NGF, BDNF, and bFGF on striatal degeneration caused by 3-nitropropionic acid induced mitochondrial blockade. *Neurosci Abst* 19, 1993.
- A26. Galpern, W.R., Frim, D.M., Uhler, T.A., Beal, M.F., Breakefield, X.O., Isacson, O. Biologically delivered BDNF prevents dopaminergic neuronal death in a rat model of
- A27. Isacson, O., Frim, D.M., Yee, W.M., Wullner, U. NGF reduces striatal excitotoxic neuronal loss without affecting concurrent neuronal stress or NMDA receptors. *Neurosci Abstr* 19, 1993.
- A28. Andersen, J.K., Frim, D.M., Isacson, O., Breakefield, X.O. Catecholaminergic cell atrophy in a transgenic mouse over expressing MAO-B in neurons. *Neurosci Abstr* 19, 1993.
- A29. Uhler, T.A., Frim, D.M., Pakzaban, P., Schumacher, J., Rosenberg, W.S., Isacson, O. Pretreatment with mega-dose methylprednisolone increases excitotoxic lesion size in the rat striatum. *Neurosci Abstr* 19, 1993.
- A30. Castillo, B., del Cerro, M., Breakefield, X.O., Frim, D.M., Bohn, M.C. Genetically modified astrocytes carrying a human preproBDNF cDNA promote survival of retinal ganglion cells *in vitro*. *Neurosci Abstr* 19, 1993.

David M. Frim page 19

- A31. Lauder, J., Liu, J., Frim, D.M., Breakefield, X.O., Bohn, M.C. Astrocytes infected with a retrovirus bearing a mouse β -NGF or human preproBDNF cDNA differentially affected survival of serotonergic (5-HT), noradrenergic (NA) and gaba-ergic (GABA) neurons. Neurosci Abstr 19, 1993.
- A32. Frim, D.M., Isacson, O. Neurosurgical implantation of cells genetically engineered to secrete a neurotrophic factor protects dopaminergic neurons in a rat model of Parkinson's disease. Congress of Neurological Surgeons Annual Meeting, Vancouver, 1993.
- A33. Chapman, P.H., Frim, D.M. Symptomatic hydromyelia following operation for spinal lipoma. Ann. Meeting Pediatric Section of the Am. Assoc. Neurol. Surg., San Antonio, 1993.
- A34. Yoshimoto, Y., Lin, Q., Collier, T., Frim, D., Breakefield, X.O., Bohn, M.C. Transplantation of primary astrocytes genetically altered to secrete brain-derived neurotrophic factor (BDNF) amphetamine-induced rotational asymmetry in the partially lesioned hemiparkinsonian rat. 5th International Symposium on Neural Transplantation, 1994.
- A35. Frim, D.M., Padwa, B., Buckley, D., Crowell, R.M., Ogilvy, C.S. Mandibular subluxation as an adjunct to exposure of the distal internal carotid artery in endarterectomy surgery. Annual meeting of the Congress of Neurological Surgeons, Chicago, 1994.
- A36. Yoshimoto, Y., Lin, Q., Collier, T., Frim, D.M., Breakefield, X.O., Bohn, M.C. Astrocytes genetically altered to express brain-derived neurotrophic factor (BDNF) ameliorate amphetamine-induced rotation following grafting into the striatum of the partially lesioned hemiparkinsonian rat. American Society for Neural Transplantation Annual Meeting, 1994.
- A37. Andersen, J.K., Frim, D.M., Isacson, O., Breakefield, X.O. Transgenic mice over expressing monoamine oxidase B neuronally. Movement Disorders 8:405, 1993.
- A38. Frim, D.M., Giriunas, I., Ballantine, H.T., Crowell, R.M. Safety of postoperative low-dose heparin for the prevention of thromboembolic complications in the neurosurgical patient. New England Neurosurgical Society, Spring Meeting, Boston, MA, 1992.
- A40. Dinsmore, J.H., Pakzaban, P., Deacon, T.W., Ratliff, J., Frim, D.M., Isacson, O. Intracerebral transplantation of neurons differentiated *in vitro* from pluripotent embryonic stem cells. Neuroscience Abstracts 20, 1994.
- A41. Lin, O., Yoshimoto, Y., Collier, T.J., Frim, D.M., Breakefield, X.O., Bohn, M.C. BDNF secreting astrocytes grafted into the striatum of a partially lesioned rat model of Parkinson's disease ameliorate amphetamine-induced rotational behavior. Neuroscience Abstracts 20, 1994.
- A42. Galpern, W.R., Frim, D.M., Tatter, S.B., Beal, M.F., Breakefield, X.O., Isacson, O. Ex vivo gene therapy by genetically engineered BDNF-secreting fibroblasts in a rat MPP+ model of substantia nigra degeneration. International Conference on Gene Therapy for CNS Disorders, Philadelphia, 1995.

David M. Frim page 20

- A43. Frim, D.M., Zec, N., Golden, J., Scott, R.M. Presence of immunohistochemically identifiable tissue plasminogen activator in cavernous angiomas: a potential mechanism for re-hemorrhage and lesion growth. Ann. Meeting, Pediatric Section of the Am. Assoc. of Neurological Surgeons, Pasadena, 1995.
- A44. Eskandar, E.N., Carter, B., Frim, D.M. Antibiotic prophylaxis in the treatment of post-traumatic CSF fistulae. Ann. Meeting, Pediatric Section of the Am. Assoc. of Neurological Surgeons, Pasadena, 1995.
- A45. Galpern, W.R., Frim, D.M., Mathews, R., Beal, M.F., Isacson, O. Mechanism of NGF-mediated neuroprotection in a 3NP induced model of Huntington's disease. Am. Soc. For Neural transplantation Ann. Meeting, Clearwater, FL., 1996.
- A46. Spangler, W.J., Frim, D.M., Tatter, S.B., Barker, F.G., III, Cosgrove, G.R. Clinical impact of stereotactic brain biopsy: A retrospective review of 484 cases. Ann. Meeting, Am. Assoc. of Neurological Surgeons, Minneapolis, 1996.
- A47. Park, J.K., Frim, D.M., Schwartz, M.S., Goumnerova, L.C., Black, P.McL., Scott, R.M. and Madsen, J.R. Cost-effective use of institutional clinical practice guidelines in the management of ventriculoperitoneal shunt malfunction. Congress of Neurological Surgeons Annual Meeting, Montreal, 1996; Neurosurgery 39:643, 1996.
- A48. Eskandar, E.N., Carter, B., Frim, D.M., Barker, F.G., II. Efficacy of prophylactic antibiotics for post-traumatic CSF fistulae: a meta-analysis. Congress of Neurological Surgeons Annual Meeting, Montreal, 1996; Neurosurgery 39:636, 1996.
- A49. Frim, D.M., Fleig, D., Reidy, P., Goumnerova, L.C. CSF shunt valve performance monitored telemetrically in patients with shunted hydrocephalus. Ann. Meeting, Pediatric Section of the Am. Assoc. of Neurological Surgeons, Charleston, 1996.
- A50. Frim, D.M., Fleig, D., Reidy, P., Goumnerova, L.C. CSF shunt valve performance monitored telemetrically in patients with shunted hydrocephalus. Ann. Meeting, Am. Assoc. of Neurological Surgeons, Denver, 1997.
- A51. Frim, D.M. Chronic non-invasive monitoring of intracranial pressure-an aid to evaluation of shunt function. Motion picture exhibition, American College of Surgeons Clinical Congress, Chicago, 1997.
- A52. Frim, D.M., Goumnerova, L.C. Telemetric intraventricular pressure measurements after third ventriculo-cisternostomy. Ann. Meeting, Joint Section of Pediatric Neurosurgery Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, New Orleans, 1997.
- A53. Munshi, I., Lathrop, D., Madsen, J.R., Frim, D.M. Intraventricular pressure in ventriculopleural shunts: a telemetric study. Young Investigators Biomedical Research Symposium, The University of Chicago, 1998.

David M. Frim page 21

- A54. Yamini, B., Goumnerova, L.C. Frim, D.M. Endoscopic approach to non-communicating fluid spaces in the shunted patient. Ann. Meeting, Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Indianapolis, 1998
- A55. Curry, D., Frim, D.M. Delayed repair of open depressed skull fractures. Ann. Meeting, Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Indianapolis, 1998.
- A56. Frim, D.M., Munshi, I., Goumnerova, L., Madsen, J., Lathrop, D. In vivo intraventricular pressure dynamics when shunting CSF to unusual absorptive surfaces: a telemetric study. Ann. Meeting, Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Indianapolis, 1998.
- A57. Munshi, I., Frim, D., Stine-Reyes, R., Weir, B., MacDonald, R.L., Hekmatpanah, J., Brown, F. Effects of posterior fossa decompression with and without duroplasty on Chiari malformation associated syringomyelia. Joint Section on the disorders of the Spine and Peripherhal Nerves, Am Assoc Neurol Surg and Cong Neurol Surgeons, Ann. Meeting, 1999.
- A58. Frim, D.M., Lathrop, D. In vivo intraventricular pressure dynamics consequent to manipulations of the Codman-Medos programmable shunt valve. Congress of Neurological Surgeons Annual Meeting, Boston, 1999.
- A59. Chkhenkeli, S.A., Towle, V.L., Milton, J.G., Spire, J-P., Frim, D., Erickson, R.K. Coherence study of cortical background activity for epileptic focus localization in resective epilepsy surgery. *Epilepsia* 40(suppl. 7):168, 1999.
- A60. Frim, D.M., Papasian, N. A theoretical model of benign external hydrocephalus that predicts a predisposition towards extra-axial hemorrhage after minor head trauma. American Society of Pediatric Neurosurgeons Ann. Meeting, Kona, Hawaii, 2000.
- A61. Frim, D.M., Lathrop, D., Goumnerova, L.C. Intraventricular pressure changes after third ventriculo-cisternostomy for aqueductal stenosis. *Neurosurgery* 47:537-538, 2000.
- A62. Curry, D.J., Wright, D.A., Lee, R.C., Kang, U.J., Frim, D.M., The surfactant poloxamer 188 decreases inflammation after injury in the rat brain. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, San Diego, 2000.
- A62. Frim, D.M., Curry, D.J., Wright, D.A., Lee, R.C., Kang, U.J.: The surfactant poloxamer 188 decreases tissue loss and inflammation after injury in the rat brain. American Society of Pediatric Neurosurgery Ann. Meeting, Kapalua, Hawaii, 2001.
- A63. McKinnon, M., Frim, D.M. Combined transcranial/transoral approach to midline skull base teratoma in infants. North American Skull Base Society Annual Meeting, Orlando, 2001.

David M. Frim page 22

- A64. McKinnon, M., Frim, D.M. Avoidance of reoperation in craniosynostosis by distraction osteogenesis. International Society of Craniofacial Surgery, Visby, Gotland, Sweden, June, 2001.
- A65. Frim, D.M., Fagan, L. Pseudotumor Cerebri associated with treatment for Chiari Mmalformation type 1. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, New York, 2001.
- A66. Le, H.N. Frim, D.M. Lumboperitoneal shunting as a treatment for slit ventricle syndrome. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, New York, 2001.
- A67. Yamini, B., Rubin, C., Frim, D.M. Endoscopic approach to pineal region tumors. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, New York, 2001.
- A68. Chkhenkeli, S.A., Milton, J.G., Towle, V.L., Spire, J.-P., Hecox, K., Erickson, R.K., Frim, D. Concept of epileptic system as a basis for multifocal intractable epilepsy surgery. *Epilepsia*, 42:275, 2001.
- A69. Macdonald, R.L., Amidei, C., Baron, J., Weir, B., Hekmat-panah, J., Brown, F., Erickson, R. Frim, D., Gupta, N. Randomized, blinded, prospective comparison of dalteparin and low dose subcutaneous heparin for prevention of venous thromboembolic complications in patients undergoing craniotomy. Annual Meeting, Congress of Neurological Surgeons, San Antonio, Texas, 2000.
- A70. Zhang X, Drongelen W van, Hecox K, Towle VL, Frim DM, McGee A, Lian J, and He B (2002) - Localization of epileptic foci by means of cortical imaging using a spherical head model. 11th Annual Computational Neuroscience Meeting CNS 2002.
- A71. Zhang X, Drongelen W van, Hecox K, Towle VL, Frim DM, McGee A, Lian J, and He B. Cortical imaging of interictal epileptiform activity using an inhomogeneous spherical head model. 5th International Conference on Bioelectromagnetism, 2002.
- A72. Ramirez JM, Koch H, Pena F, Drongelen W van, Hecox KE, Frim DM, Chico MS, and Marcuccilli CJ. Characterization of neuronal activity in human neocortical slice preparations obtained from the seizure focus of pediatric patients. 56th Annual Meeting of the American Epilepsy Society, 2002.
- A73. Koch H, Pena F, Drongelen W van, Hecox KE, Frim DM, Chico MS, Ramirez JM, and Marcuccilli CJ. Neural activity characterized in neocortical slices obtained from the epileptic focus of pediatric patients. Society for Neuroscience Annual Meeting, 2002.
- A74. Curry, D.J., Wright, D.A., Lee, R.C., Kang, U.J., Frim, D.M. Poloxamer 188 volumetrically decreases neuron loss in a rat model of excitotoxicity in a time dependent manner. Congress of

David M. Frim page 23

Neurological Surgeons, Ann. Meeting, Philadelphia, 2002. (winner of Stryker Resident Award for best submission in the field of brain or craniofacial trauma)

- A75. Frim, D.M., Wright, D.A., Curry, D.J., Cromie, W., Lee, R.C., Kang, U.J.: The surfactant poloxamer-188 protects against glutamate toxicity in the brain when delivered directly into the CSF. Society of University Neurosurgeons, Annual Meeting, Chicago, 2002.
- A76. Frim, D.M., Adelson, D., Kestle, J., Mazzola, K., Walker, M.L., Meisel, K., Stylos, L., Penn, R. Use of a novel continuous long-term intracranial pressure monitor in ambulatory hydrocephalus patients. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Phoenix, 2002.
- A77. Sikorski, C.W., Yamini, B., Frim, D.M. Endoscopic intracranial cyst fenestration in neonates and infants. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Phoenix, 2002.
- A.78. Yamini, B., Lee, M.C., Frim, D.M. Cisterna magna to pleural shunting in pseudotumor cerebri patients who fail lumbar or ventricular shunting. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Phoenix, 2002.
- A.79. Cadichon, S.B., Le, H., Curry, D., Wright, D.A., Kang, U.J., Frim, D.M. Surfactant poloxamer protects against hemorrhage-associated neuronal loss in the rat brain. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Phoenix, 2002.
- A80. Khorasani, L., Sikorski, C.W., Frim, D.M. Lumboperitoneal shunting preferentially drains the subarachnoid space. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Phoenix, 2002.
- A81. Frim, D.M., Curry, D.J., Le, Hoang, Cadichon, S., Wright, D.A., Kang, U.J.: The surfactant poloxamer, P-188, is a potent neuroprotectant in a model of intraparenchymal brain hemorrhage. American Society of Pediatric Neurosurgery Ann. Meeting, Hualalai, Hawaii, 2003.
- A82. Zhang, X., van Drongelen, W., Hecox, K., Towloe, V., Frim, D., M., McGee, A., He, B. Cortical Imaging of epileptiform activity from interictal spikes in pediatric epilepsy. Soc. Neurosci Abstr, #863.10, 2003.
- A83. van Drongelen, W., Koch, H., Pena, F., Tryba, A., Parkis, M., Loweth, J., Hecox, K., Kohrman, M., Frim, D., Chico, M., Ramirez, J., Marcuccilli, C. Differences in bursting properties between least and most abnormal tissue obtained from pediatric patients with intractable epilepsy, Soc. Neurosci Abstr, #99.15, 2003.
- A84. Musleh, W., Hecox, K., Kohrman, M., Chico, M., Frim, D.M. Low incidence of subdural electrode grid-related complications in prolonged pediatric EEG monitoring. Joint Section of

David M. Frim page 24

Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Salt Lake City, 2003.

- A85. Frim, D.M., Martin-Douglas, R. The adult practice of Pediatric Neurosurgery: clinical, referral, and financial issues. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, San Francisco, 2004.
- A86. Holleman, J., Frim, D. Impact of a nurse practitioner on a pediatric neurosurgical service. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, San Francisco, 2004
- A87. Sikorski, C.W., Iteld, L., Yamini, B., Curry, D.J., McKinnon, M., Frim, D.M. Correction of saggital synostostosis using a bilateral "trp-door" surgical technique: a ten year review. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, San Francisco, 2004
- A88. Matiello, J.,A., Faris, G.W., Bardo, D.M.E., Hecox, K., Kohrman, M., Maarcuccilli, C., Frim, D.M. Outcome following multiple topectomies in children with intractable epilepsy and rediographically normal eleptogenic tissue. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, San Francisco, 2004
- A89. Frim, D.M., Martin-Douglas, R. The adult practice of Pediatric Neurosurgery: a subspecialty for pediatric neurosurgeons. Am. Soc. Ped. Neurosurgeons. Maui, 2005.
- A90. Do, T., Lacy, M., Hunter, S., Mottlow, D., Karsza, K., Frim, D. Long term neurocognitive impact of nonsiphoning shunt placement. International Neuropsychological Society, Annual Meeting. St. Louis, 2005.
- A91. Faris, G.W., Bardo, D.M.E., Frim, D.M., Marcuccilli, C.J., Hecox, K.E., Williams, D. Range Of Preoperative Imaging Findings In Pediatric Patients With Intractible Epilepsy. Annual Meeting, American Society of Neuroradiology, May, 2005.
- A92. Lai, Y., Drongelen, W. van, Zhang, X., Frim, D.M., Hecox, K.E., He, B. Noninvasive localization of epileptiform interictal spikes by means of cortical imaging using realistic head geometry boundary element head models. 5th International Conference BEM&NFSI, Minneapolis, MN, 2005.
- A93. Lai ,Y., Drongelen, W. van, Ding, L., Hecox, K.E., Towle, V.L., Frim, D.M., He, B. Estimation of in vivo human brain-to-skull conductivity ratio by means of cortical potential imaging. 5th International Conference BEM&NFSI, Minneapolis, MN, 2005.
- A94. Boullerne, A., Dello-Russo, C., Frim, D., Arnason, B., Feinstein, D. Adult primate oligodendrocytes in culture express nos-3 and are functionally different in white matter and gray matter. *Neuron-Glia Interactions*, Montreal, Quebec, June, 2005.
- A95. Ferguson, S., Frim, D.M. Observations regarding CSF shunts in a large single-institution

David M. Frim page 25

review. International Society for Pediatric Neurosurgery, Ann. Meeting, Vancouver, B.C., 2005.

- A96. Frim, D., Lacy, M., Mottlow, D., Karcza, S., Hunter, S., Do, T. Neurocognitive performance after shunting for hydrocephalus: effects of shunt type. International Society for Pediatric Neurosurgery, Ann. Meeting, Vancouver, B.C., 2005.
- A97. Sikorski, C.W., Frim, D.M. The use of adjustable shunt valve programmers by patients at home. Congress of Neurological Surgeons, Ann. Meeting, Boston, 2005.
- A98. Frim, D.M., Do, T., Mottlow, D., Hunter, S., Lacy, M., Sikorski, C.W. Neurocognitive performance after shunting for hydrocephalus: effects of shunt valve type, Congress of Neurological Surgeons, Ann. Meeting, Boston, 2005.
- A99. Frim, D.M. Indications for Chiari surgery based on outcome. Rachidian Society, Annual Meeting, Mauna Lani, 2006.
- A100. Frim, D.M. Lessons learned from long-term intracranial pressure monitoring. Rachidian Society, Annual Meeting, Mauna Lani, 2006.
- A101. Towle, V.L., Edgar, J.C., Frim, D.M., Nair, D., Desai, P., Nair, S., and Kohrman, M. Mapping language areas without direct electrical stimulation of cortex. Am Soc Neurophysiologic Monitoring, Ann Meeting, Seattle, 2006.
- A102. Frim, D.M., Hecox, K., Kohrman, M., Marcucilli, C., Turner, M. Is multifocal seizure resection in children reasonable? Congress of Neurological Surgeons, Annual Meeting, Chicago, 2006.
- A103. Ferguson, S., Myers, G.R., Rosen, D., Frim, D.M. Why do some patients need so many shunt revisions? Predictors of shunt survival in a large population of patients undergoing shunt revisions. Congress of Neurological Surgeons, Annual Meeting, Chicago, 2006.
- A104. Narayanan, M., Curry, D., Yamini, B., Bardo, D., Frim, D.M. Use of perfusion MRI for operative decision making in Moyamoya revascularization. Congress of Neurological Surgeons, Annual Meeting, Chicago, 2006.
- A105. Lacy, M., Pykkonen, B., Mottlow, D., Do, T., Hunter, S., Frim, D.M. Shunting vs. ETV: long term cognitive outcome. Congress of Neurological Surgeons, Annual Meeting, Chicago, 2006.
- A106. Foster, K.A., McKinnon, M., Frim, D.M. Recurrence of synostosis following surgical repair of crainiosynostosis. Congress of Neurological Surgeons, Annual Meeting, Chicago, 2006.
- A107. Frim, D.M., Foster, K., Zimmerman, F. Cardiological evaluation of Chiari 1-related drop attacks. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Denver, 2006.

David M. Frim page 26

- A108. Narayanan, M.V., Frim, D.M., Yamini, B., Curry, D. Problems in crainiosynostosis: elevated ICP as measured by LP as an adjunct to management. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Denver, 2006.
- A109. Narayanan, M.V., Frim, D.M. Symptomatology of Chiari malformation type 1 in patients under age 5. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Denver, 2006.
- A110. Ferguson, S., Meyers, G., Rosen, D., Frim, D. Predictors of shunt survival after revision. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Denver, 2006.
- A111. Pykkonen, B., Hunter, S., Larson, E., Lacy, M., Mottlow, D., Frim, D. Hydrocephalus, Cognition, and acute changes in intracranial pressure. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Denver, 2006.
- A112. McAllister, J.P., Williams, M.A., Walker, M.L., Kranz, D., Fleming, L., Bergsneider, M., Del Bigio, M.R., Frim, D.M., Kestle, J.R., Luciano, M.G., Madsen, J.R. Priorities for hydrocephalus research: report from the NIH-sponsored workshop, "Hydrocephalus: Myths, New Facts, Future Directions". Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Denver, 2006.
- A113. Curry, D.J., Narayanan, M., Yamini, B., Frim, D., Staley, K., Glick, J. Subdural hematoma in the setting of subarachnomegaly. Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, Denver, 2006.
- A114. Frim, D.M. Identification of "ICP-sensitive" neurocognitive domains. American Society of Pediatric Neurosurgeons, Annual Meeting, Lana'i, February, 2007.

Books:

- 1. Frim, D.M., Madsen, J.R., eds. *Neurosurgery of the Neonate*, Neurosurgery Clinics of North America, Vol. 9 (W.B. Saunders; Philadelphia), 1998.
- 2. Frim, D.M., Gupta, N., eds. *Pediatric Neurosurgery* (Landes Biosciences, Georgetown, Texas), 2006.

Book Chapters and Invited Manuscripts:

- 1. Codington, J.F., and Frim, D.M. Cell surface macromolecular and morphological changes related to allotransplantability in the TA3 tumor. In Nowotney, A., ed., *Biomembranes* (New York: Plenum Press) 11:207-258, 1983.

David M. Frim page 27

2. Frim, D.M., Andersen, J.K., Short, M.P., Schumacher, J.M., Isacson, O., Breakefield, X.O. Gene transfer into the mammalian central nervous system: neurotrophic factors. in Moody, T.W., ed., *Growth Factors, Peptides and Receptors* (Plenum Publishing, New York), p. 83-91, 1993.
3. Frim, D.M., Chapman, P.H. Spina Bifida. in Morris, P.J., Malt, R.A., eds., *Oxford Textbook of Surgery, vol. 2* (Oxford University) 2115-2118, 1994.
4. Frim, D.M., Cosgrove, G.R. An approach to the neurosurgical treatment of chronic pain. in Borsook, D., et al., eds. *The Massachusetts General Hospital Pain Manual* (Little Brown; New York), 1995.
5. Frim, D.M., Cosgrove, G.R. Motor sequelae and involuntary movement disorders in Macfarlane, R., ed., *Outcome After Head, Neck and Spinal Trauma: a medicolegal guide* (Butterworth-Heinemann: Oxford), 1995.
6. Frim, D.M., Scott, R.M., Madsen, J.R. Surgical management of neonatal hydrocephalus, in Frim, D.M., Madsen, J.R., eds., *Neurosurgery of the Neonate*, Neurosurgical Clinics of North America 9:105-110, 1998.
7. Madsen, J.R., Frim, D.M. Neurosurgery of the newborn. in Avery, G.B., Fletcher, M., MacDonald, M.G., eds. *Neonatology: Pathophysiology and Management of the Newborn*, 5th Edition (Lippincott), 1999, pp. 1253-1268.
8. Frim, D.M., Scott, R.M. Management of Cavernous Malformations in the Pediatric Population in Ogilvy, C.S., ed., *Cavernous Malformations*, Neurosurgical Clinics of North America, 10:513-518, 1999.
9. Frim, D.M., Gupta, N., Scott, R.M. Cavernous Malformations in McLone, D., ed., *Pediatric Neurosurgery: Surgery of the Developing Nervous System*, 3rd ed., Saunders, 2000.
10. Gupta, N., Frim, D.M. Benign Spine Tumors in Children. In Youmans, *Neurological Surgery*, 5th ed., Saunders, 2003.
11. Frim, D.M. Craniofacial Dysmorphism. WebMD internet publication, Spring, 2002.
12. Curry, D.J., Wright, D.A., Lee, R.C., Kang, U.J., Frim, D.M. Poloxamer 188 volumetrically decreases neuron loss in a rat model of excitotoxicity in a time dependent manner. *Clin Neurosurg* 50:374-381, 2003.
13. Yassari, R., Frim, D.M., Evaluation and management of the chiari malformation type one for the primary care pediatrician . *Ped Clin North Am*, 51:477-490, 2004.

David M. Frim page 28

14. Frim, D.M., Penn, R., Lacy, M. Surgical Treatment of Adult Hydrocephalus. in Schmidek and Sweet, eds, *Operative Neurosurgical Techniques*, 4th edition, 2005.
15. Tonsgard, J., Yamini, B., Short, M.P., Frim, D.M., Surgical Management of Neurofibromatosis in Schmidek and Sweet, eds, *Operative Neurosurgical Techniques*, 4th edition, 2005.
16. Frim, D.M., Curry, D.J. Extracerebral fluid collections in infants, in *Principles and Practice of Pediatric Neurosurgery*, eds. Albright, L., Pollack, I., Adelson, D., 2nd edition, 2005.
17. Lee, M.C., Frim, D.M. Primary Brain Tumors: Gliomas and Meningiomas, in *Holland-Frei Manual of Cancer Medicine*. eds. Brown, C., Riny, B., Conell, P., and Posner, M. (BC Decker, Hamilton, Ont.) 2005, pp. 415-434.
18. Frim, D. Chiari malformation type 1 may be more common than thought. American Academy of Pediatrics News, July, 2005, p. 10.
19. Lee, M.C., Frim, D.M. Neonatal Neurosurgery, in Frim, D.M., Gupta, N., eds. *Pediatric Neurosurgery* (Landes Biosciences, Georgetown, Texas), 2006, pp 110-116.
20. Frim, D.M., Gupta, N. Hydrocephalus, in Frim, D.M., Gupta, N., eds. *Pediatric Neurosurgery* (Landes Biosciences, Georgetown, Texas), 2006, pp. 117-129.
21. McKinnon, M., Frim, D.M. Craniofacial Surgery, in Frim, D.M., Gupta, N., eds. *Pediatric Neurosurgery* (Landes Biosciences, Georgetown, Texas), 2006, 161-174.
22. Narayanan, M., Frim, D.M. Indirect Bypasses for Moyamoya Syndrome, in MacDonald, R.L., Ed., *Neurosurgery Operative Atlas* (Thieme, New York), 2006.

Reviews and Letters:

1. Moore-Ede, M.C., Frim, D.M. Book Review: *Contemporary Medical Physiology*. New England Journal of Medicine 312:383, 1985.
2. Frim, D.M., Ojemann, R.G. Instrumentation, Technique and Technology: The Leica/Wild neurosurgery microscope. *Neurosurgery* 37:1222-1223, 1995.
3. Piatt, J.H., Frim, D.M. Glutaric Aciduria Type 1 and non-accidental head injury--Letter. *Pediatrics* 109:554, 2002.

Invited presentations at meetings not included as an abstract:

David M. Frim page 29

1. Annual meeting, Congress of Neurological Surgeons, Lunch Seminar Speaker: "Pineal Tumors: Stereotactic Biopsy and Supratentorial Approaches", October, 1997.
2. American Society of Pediatric Neurosurgeons Annual Meeting, "Indications for Chiari decompression based on outcome", Maui, 2001.
3. Third International Hydrocephalus Conference, "Continuous Long-Term Monitoring of Intracranial Pressure in Ambulatory Hydrocephalus Patients", Chicago, 2002.
4. American Association of Neurological Surgeons, Ann. Meeting, Discussant (with Madsen, J.R.) on Manley et al: "Aquaporin-1 deletion reduces osmotic water permeability, intraventricular pressure, and CSF production", San Diego, 2003.
5. Computational Models of Hydrocephalus, Chicago, 2003: "How do Shunts Work: Real Time Data on Shunted Patients with Chronic ICP Recording".
6. American Association of Neurological Surgeons annual Meeting, Breakfast Seminar Speaker: "How will we design the shunt of the future?", Orlando, 2004.
7. American Association of Neurological Surgeons annual Meeting, Breakfast Seminar Speaker: "Decision making in the operative treatments of pediatric intracranial hematomas", Orlando, 2004.
8. First STARS Symposium: Intracranial Pressure Control and Treatment in Hydrocephalus, "Non-Invasive Monitoring of Intracranial Pressure", Detroit, 2004.
9. Japanese Society of NeuroEndoscopy Annual Meeting, "NeuroEndoscopy in the USA: Current Trends", Tokyo, Japan, December, 2005
10. Japanese Society of NeuroEndoscopy Annual Meeting, Lunch Seminar Speaker: "Observations from Chronic Intracranial Pressure Monitoring in Shunted Hydrocephalic Humans", Tokyo, Japan, December, 2005

Visiting Professorships, Invited Lectureships and Grand Rounds Presentations:

Internal:

The University of Chicago, Orthopedic Grand Rounds; Myelodysplasia: A Neurosurgical Perspective, August, 1996.

The University of Chicago Pediatric Trauma/Emergency Department Grand Rounds; Pediatric Neurosurgical Trauma in the Emergency Department, September, 1996.

The University of Chicago Neurology Department Grand Rounds; Issues in Hydrocephalus and Ventriculoperitoneal Shunting, September, 1996.

David M. Frim page 30

University of Chicago Neuroscience Nursing Symposium, Cerebrospinal Fluid Shunts: New Options, January, 1997

University of Chicago Children's Hospital, A Day of Trauma (Trauma Class), "Neurosurgical Trauma", August, 1997

"Pediatric Neurosurgical Trauma", The University of Chicago Department of Surgery Grand Rounds, October, 1997.

The University of Chicago Physicians Group, Child Life Associates, Neurosurgical Lumps, Bumps, Pocks, and Divots, January, 1997.

The University of Chicago Medical Center Reunion 1997, Surgery Luncheon Faculty Presentation, "Neurosurgical Endoscopy", June, 1997.

The University of Chicago Center for Advanced Medicine Consumer Seminar, "Cranial Dysmorphism: The Funny Looking Head", March, 1998

The University of Chicago Department of Anesthesia Specialty Rounds, "Cervical Spine Stability", August, 1998

The University of Chicago Section of Neonatology, Teaching Rounds, "Neurosurgery of the Neonate", January, 1999.

The University of Chicago, Neurology Department Grand Rounds, "Intracranial Pressure, CSF Flow Dynamics and Hydrocephalus in the Human". September, 1999.

The University of Chicago Department of Anesthesia Specialty Rounds, "Cervical Spine Stability", September, 1999

University of Chicago Children's Hospital Third Annual Pediatric Day: Hot Topics. "Cranial Dysmorphism: The Evaluation and Treatment of the Child with an Odd-shaped Head", September, 1999.

The University of Chicago Children's Hospital Pediatric Neuroscience Day, "Evaluation and Treatment of Hydrocephalus 2000", June, 2000.

The University of Chicago and LaRabida Children's Hospital Symposium, The Child with Cerebral Palsy, "Neurosurgical Management of Spasticity", Rosemont, IL, August, 2000.

Pediatric Grand Rounds, Department of Pediatrics, The University of Chicago, "Issues in the Management of Hydrocephalus", October, 2000.

Pediatric House Staff Teaching Rounds, Department of Pediatrics, The University of Chicago, "Myelodysplasia and the spinal dysraphic states", November, 2000.

David M. Frim page 31

The University of Chicago Hospitals Special Seminar: "Advances in the Diagnosis and Treatment of Adult and Pediatric Epilepsy", April, 2001.

Grand Rounds, Department of Surgery, The University of Chicago, "Pediatric Head trauma: Review and Update", May, 2001.

The University of Chicago Department of Anesthesia Specialty Rounds, "Stability of the Cervical Spine", September, 2001

Pediatric House Staff Teaching Rounds, Department of Pediatrics, The University of Chicago, "Hydrocephalus Update", October, 2001.

Pediatric House Staff Teaching Rounds, Department of Pediatrics, The University of Chicago, "Myelodysplasia", March, 2002.

Neurosurgery Grand Rounds, the University of Chicago, "The InSite Monitor Clinical Trial", June, 2002.

Grand Rounds, Department of Dermatology, The University of Chicago, "Neurosurgical lumps, bumps, and pocks", November, 2002.

UCCH Nursing Education Day, "Perioperative Nursing Assessment of the Pediatric Neurosurgical Patient", January, 2003.

Pediatric Trauma Rounds, Department of Surgery, The University of Chicago, "Guidelines for the treatment of severe pediatric head injury: Update", March, 2003.

Grand Rounds, High Risk Obstetrical Section, Dept. of Obstetrics and Gynecology, The University of Chicago, "General Concepts and Approaches to Hydrocephalus", March, 2003.

University of Chicago Children's Hospital Advanced Education Day, "Updates in Neurosurgery: Chiari Malformation and VP Shunts", March, 2003.

Fellow's Rounds, Section of Neonatology, University of Chicago, "A Simple Minded Neurosurgical Way to Read MRI Scans", April, 2003.

Department of Psychiatry, Section of Neuropsychology Neuroanatomy Series, "Vascular supply of the brain; Cerebrospinal fluid dynamics", September, 2003.

Pediatric House Staff Teaching Rounds, Department of Pediatrics, The University of Chicago, "Hydrocephalus", September, 2003.

University of Chicago Minimally Invasive Surgery Multi-Specialty Group Meeting, State of the Art Presentation, "Cranial Neuro-Endoscopy: Promise Unfulfilled", October, 2003.

David M. Frim page 32

University of Chicago Children's Hospital, Pediatric Neurology Update Day, "Hydrocephalus, Chiari, and other Neurosurgical Diseases Diagnosed by General Pediatricians", Oak Brook, IL, October, 2003.

Section of Geriatrics, The University of Chicago, Grand Rounds, "Dementia, Normal Pressure Hydrocephalus, and CSF shunting in the Elderly", October, 2003.

Department of Psychiatry, Section of Neuropsychology Lecture Series, "Head and Spine Trauma", The University of Chicago, February, 2004.

Department of Pediatrics, The University of Chicago, Faculty Research Seminar Series, "Hydrocephalus for the Connoisseur", November, 2004.

Department of Psychiatry, Section of Neuropsychology Didactic Series, "Craniofacial Dysmorphism", February, 2005.

Nursing week Symposium, The University of Chicago Hospitals, "Impact of a nurse practitioner on a pediatric neurosurgical service", May, 2005

The University of Chicago Hospitals, Neuroscience Nurses Week, "Q and A session: Syringomyelia, Chiari, and Pseudotumor Cerebri", May, 2005.

The University of Chicago, Section of Neurosurgery, Resident didactic lecture series, "Introduction to Neurosurgical Residency: What You Need to Know", July, 2005.

Grand Rounds, Section of Dermatology, The University of Chicago, "Neurosurgical lumps, bumps, pocks, and divots", February, 2006.

The University of Chicago Hospitals Nurses' Week Presentation: "To Count or Not to Count: That is the Question"; Presenter and Panel Discussant, May, 2006

The University of Chicago Section of Neurosurgery, Resident Didactic Lecture Series, "Chiari Malformations", May, 2006.

The University of Chicago Section of Neurosurgery, Resident Didactic Lecture Series, "Hydrocephalus", June, 2006.

Department of Pediatrics, The University of Chicago, Resident Didactic Lecture, "Management of the Neurosurgical Patient", July, 2006.

Department of Pediatrics, The University of Chicago, Resident Didactic Lecture, "Chiari Malformation Type 1 for the Pediatrician", September, 2006.

Department of Obstetrics and Gynecology, The University of Chicago, Maternal-Fetal Medicine Rounds, "Neurosurgical Issues for the Gynecologist, Part 1", November, 2006.

David M. Frim page 33

Department of Obstetrics and Gynecology, The University of Chicago, Maternal-Fetal Medicine Rounds, "Neurosurgical Issues for the Gynecologist, Part 2", January, 2007.

Department of Psychiatry, The University of Chicago, Resident lecture series: "Dementia, Normal Pressure Hydrocephalus, and CSF Shunting", May, 2007.

External:

LaRabida Children's Hospital and Rehabilitation Center Chief's Rounds; Hydrocephalus and Issues in CSF Shunting, September, 1996.

Joint Neurosurgical Services of the Brigham and Women's and Children's Hospitals, Boston, Ma, "CSF Dynamics, Hydrocephalus, and Telemetric Intraventricular Pressure Monitoring", January, 1997.

Massachusetts General Hospital, Neurosurgical Service, "CSF Dynamics Studied with a Telemetric Intraventricular Pressure Monitor", September, 1997.

Northwest Indiana Chapter of the American Association of Neuroscience Nurses: New Waves in Neuroscience, "Pediatric Neurotrauma" video presentation, October, 1997.

The Children's Memorial Hospital, Chicago, IL, Surgical Grand Rounds, "Interactions between the General Surgeon and the Neurosurgeon", January, 1998.

MacNeal Hospital, Berwyn, IL, Pediatric Grand Rounds, "Cranial Dysmorphism", July, 1998

National Youth Leadership Forum, Medical Career/Chicago, "Neurosurgery", July, 1998.

The Methodist Hospital Neuroscience Institute, Merrillville, Indiana, Neurotrauma Symposium, "Management of Severe Head Trauma in the Pediatric Population", June, 1999.

Illinois Masonic Medical Center, Chicago, Illinois, Pediatric Grand Rounds, "Neurosurgical lumps, bumps, pocks, and divots", July, 1999.

Illinois Masonic Medical Center, Chicago, Illinois, Visiting Professorship Series, Dept. of Obstetric and Gynecology, "Myelodysplasia and the Spinal Dysraphic States", July, 1999.

Loyola University, Maywood Illinois, Department of Neurological Surgery Grand Rounds/Visiting Professor, "CSF Pressure Dynamics in the Treatment of Hydrocephalus", October, 1999.

Harvard Medical School/University of Chicago Continuing Education Course at Pri-Med, "Cranial Dysmorphism: What to Do About a Funny Looking Head", June, 2000.

David M. Frim page 34

Illinois Masonic Medical Center, Chicago, Illinois, Pediatric Grand Rounds, "Pediatric Brain Tumors", November, 2000.

Visiting Professor: The Hebrew University of Jerusalem/Haddasah Hospital Department of Neurosurgery, Jerusalem, Israel; "Cerebrospinal Fluid Pressure and the Treatment of Hydrocephalus", July, 2000.

National Youth Leadership Forum-Medicine 2000; Keynote Speaker, "Medical Research", Chicago, July, 2000.

Pediatric Grand Rounds, Edward Hospital System, "Neurosurgical Lumps and Bumps", Naperville, IL, September, 2000.

Schwabb Rehabilitation Hospital, Chicago, Illinois, Department of Physical Medicine and Rehabilitation Grand Rounds, "Rehabilitation Issues in the Diagnosis and Management of Hydrocephalus", March, 2001.

Provident Hospital/Cook County, Department of Emergency Medicine Grand Rounds, "Pediatric Neurosurgical Trauma, June, 2002.

Northwestern University Department of Neurological Surgery Academic Day, Visiting Professor, "Use of Surfactant Poloxamer for Neuroprotection in the Brain", July, 2002.

Northwestern University Department of Neurological Surgery Academic Day, Visiting Professor, "Use of a novel long term intracranial pressure monitor in the treatment of hydrocephalus", October, 2002.

Saint Louis University, Division of Neurosurgery, Grand Rounds, "Treatment of hydrocephalus for the connoisseur", December, 2002.

Argonne National Laboratory Advanced Photon Source/UC Program for Research in Cell Injury and Repair Mini-Symposium, "Poloxamer 188 mediated neuroprotection in the rat brain", December, 2003.

University of Wisconsin/Madison, Department of Neurosurgery Visiting Professor, "Hydrocephalus for the Connoisseur", March, 2004.

Northwestern University, Jewish Center Lecture, "Stem Cell Research: What Does Jewish Medical Ethics Have to Say?", November, 2004.

Shenzhen Children's Hospital, Shenzhen, China, Visiting Neurosurgeon (Epilepsy) and Visiting Professor, "Treatment of Intractable Epilepsy with Surgical Resection: Indications, Techniques, and Results", April, 2005.

The First Peking University Hospital, Peking University, Beijing, China, Visiting Professor, April, 2005.

David M. Frim page 35

Fudan University Children's Hospital, Shanghai, China, Visiting Professor, "Surgical Treatment of Epilepsy", April, 2005.

Stanford University, Department of Neurosurgery, Palo Alto, California, Visiting Professor, "Treatment of Hydrocephalus for the Connoisseur", June, 2005.

Barrow Neurological Institute, Phoenix, Arizona, Visiting Professor, "CSF Shunting for the Connoisseur", July, 2005.

Tokyo Woman's Medical University, Tokyo, Japan, Visiting Professor, "Neurosurgical Training in the USA: Description and Opportunities for International Neurosurgeons", December, 2005.

Chicagoland Neurospine Conference, "Chiari Malformation type 1: A "Top of the Spine" Problem", January, 2006.

Schwabb Rehabilitation Hospital, Chicago, Illinois, Department of Physical Medicine and Rehabilitation Grand Rounds, "Chiari Malformation Type 1: What the Rehab Doctor Needs to Know", September, 2006.

University of Illinois-Chicago, Department of Neurosurgery, Visiting Professor, "What you should know about hydrocephalus (but never wanted to...)", June, 2007.

Ohio State University, Department of Neurosurgery, Columbus, Ohio, Visiting Professor, "Hydrocephalus, Intracranial Pressure, CSF shunting dynamics, and Neurocognition", June 2007.

Past and Current Research Support:

Fellowships:

1980	Research Fellowship (Senior Honors Thesis), Department of Biochemistry, Harvard University, Cambridge, Massachusetts	\$1,200.
1981	Department of Biophysics, Visiting Student Fellowship, Weizmann Institute of Science, Rehovot, Israel	\$1,200.
1982	Summer Research Fellowship, Harvard Medical School, Boston, Massachusetts	\$2,000.
1983-1988	Medical Scientist Training Program, Harvard Medical School, Boston, Massachusetts	NRSA/NIH

David M. Frim page 36

1991-1993	Post-Doctoral Training Fellowship, Molecular and Cellular Neurobiology, Neurosurgery Department, Massachusetts General Hospital and Harvard Medical School (Neurogenetics Laboratory, Massachusetts General Hospital), Boston, Massachusetts	\$80,000.
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Research Grants

Scholl Foundation, Brain Research Foundation, The University of Chicago, "Neurotrophic factor mediated neural protection in models of neural degeneration", \$50,000, 1996 – 1998; P.I.

Research Committee Pilot and Feasibility Grant, The University of Chicago, Department of Surgery, "BDNF mediated neural protection in the rat brain", \$25,000, 1997 – 1998; P.I.

Lewis Block Fund Award, Faculty of Medicine, The University of Chicago, "Mechanism of BDNF-mediated neuroprotection", \$22,000, 1998 – 1999; P.I.

Brain Research Foundation, The University of Chicago, "Morphological and biochemical changes in a murine model of congenital hydrocephalus", \$13,000, 1998-1999; P.I.

Brain Research Foundation, The University of Chicago, "Effects of biologically delivered BDNF in the raphe nucleus of the rat", \$13,500, 1999-2000; P.I.

Medtronic Neurological (Clinical Trial), "Investigation of the Administration of Baclofen Injection for the Management of Spasticity Associated with Stroke (Medtronic Protocol #D98-072)", 2001-2003; University of Chicago P.I.

Medtronic PS Medical (Clinical Trial/Feasibility Study), "InSite™ Chronic Continuous Intracranial Pressure Monitoring Device Feasibility Study (Medtronic Protocol 0101)", 2001-2003; University of Chicago P.I.

NIH/NICHD R44 HD36569-03 (P.I. K.W. Smith, Boston University) "Clinical Performance Measure for Pediatric Brain Injury", 2001-2002, University of Chicago P.I.

UCCH Golf Classic Committee, "Chiari Support Program: An Internet Survey to Define the Relationship between Fibromyalgia/Chronic Fatigue Syndrome and Chiari Malformation Type 1", \$10,000, 2002, P.I.

NIH/NIDDS R01 (P.I. K. Kapp-Simon, Northwestern University) "Neuropsychological Correlates of Craniosynostosis", 2002-2006, University of Chicago P.I.

David M. Frim page 37

NIH/NINDS RO1NS41440 "Hydrocephalus, Intracranial Pressure, and Neurocognition", \$1,159,000; 2003-2007, P.I.

Rice Creek Medical, Inc., "Non-Invasive Intracranial Pressure Assessment Utilizing Otoacoustic Emissions", 2003-2007, P.I.

Teaching:

Teaching Fellow, Department of Biochemistry, Harvard University, 1981

University Proctor, Harvard University; Member, Board of Freshman Advisors, 1982-1986

Teaching Fellow in Physiology, Department of Physiology, Harvard Medical School, 1983-1985

Tutor in Biology (Seminar Instructor), Department of Biology, Harvard University, 1984-1986 & 1991-1993

Instructor, Clarus Fall 1996 Neuro-endoscopy Clinic, Congress of Neurological Meetings, Montreal, Quebec., 1996

Lecturer, Clinical Pathophysiology Course, Pritzker School of Medicine, The University of Chicago, 1997

Clinical Case Conference for Residents, Section of Neurosurgery, The University of Chicago Hospitals, 1997-2000.

Faculty, American Association of Neurological Surgeons Profession Development Course, "Neurosurgery Review by Case Management: Oral Boards Preparation", Baltimore, 5/23/99 – 5/25/99; Houston, 11/14/99 – 11/15/99

Faculty, The University of Chicago Children's Hospital and LaRabida Children's Hospital Professional Education Program, "Spasticity in Cerebral Palsy: Current Treatment Techniques"; lecture entitled: Neurosurgical Options for Spasticity, 7/30/99,

Faculty, Pediatric Neurology Survey Course, Dept. of Pediatrics and Neurology, University of Chicago, Lecture: "Myelodysplasia", 11/19/99

Faculty, American Association of Neurological Surgeons Profession Development Course, "Neurosurgery Review by Case Management: Oral Boards Preparation", Houston, 11/00

David M. Frim page 38

Faculty, American Association of Neurological Surgeons Professional Development Course, "Neurosurgery Review by Case Management: Oral Boards Preparation", Pediatric Neurosurgery, Houston, 11/01

Faculty, The Chicago Review Course in Neurological Surgery, Chicago, IL., February, 2002

- Pediatric Neurosurgery Lecture 1: Trauma
- Pediatric Neurosurgery Lecture 2: Brain Tumors
- Pediatric Neurosurgery Lecture 3: Epilepsy Surgery
- Pediatric Neurosurgery Lecture 4: Spasticity
- Pediatric Neurosurgery Lecture 5: Craniofacial Dysmorphism
- Pediatric Neurosurgery Lecture 6: Hydrocephalus
- Pediatric Neurosurgery Lecture 7: Myelodysplasia
- Pediatric Neurosurgery Lecture 8: Congenital Anomalies

Faculty, The Chicago Review Course in Neurological Surgery, Chicago, IL., January, 2003:
Pediatric Neurosurgery Lectures I & II.

Faculty, The Chicago Review Course in Neurological Surgery, Chicago, IL., February, 2004:
Pediatric Neurosurgery: Hydrocephalus; Myelodysplasia; Craniofacial Dysmorphism.

Faculty, The University of Chicago Pediatric ICU Nursing Education Day, "Neurosurgery in the PICU: Concepts and Considerations", 4/16/04

Moderator, Scientific Session IV, American Association of Neurological Surgeons Annual Meeting, Orlando, 2004.

Moderator, Breakfast Seminar: Current Issues in Treatment of Chiari Malformation Type 1, American Association of Neurological Surgeons annual Meeting, Orlando, 2004.

Moderator, Scientific Session IV: Hydrocephalus I, Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, San Francisco, 2004.

Member, Selection Committee, Schulman Resident Award and Hydrocephalus Association Awards, Joint Section of Pediatric Neurosurgery, Am. Assoc. of Neurological Surgeons and Cong. of Neurological Surgeons, San Francisco, 2004.

Fellowship Program Director, The University of Chicago Fellowship Program in Pediatric Neurosurgery, 2005-

Residency Program Director, The University of Chicago Neurosurgical Residency Training Program, 2005-

David M. Frim page 39

Faculty, Midwest Clinical Conference Series, Chicago Medical Society, "Cranial Neuro-Endoscopy: Minimally Invasive Surgery of the Brain", Chicago, 2005.

Moderator, Session VI: Other Research and Disorders Applicable to Hydrocephalus, NIH Consensus Conference on Hydrocephalus Research, "Hydrocephalus: Myths, New Facts, Clear Directions", Bethesda, September, 2005.

Moderator, Session: "Head", Rachidian Society, Hawaii, January, 2006.

American Board of Neurological Surgeons, Guest Examiner, Oral Board Examination, Houston, May, 2006.

Moderator, Scientific Session V, American Society of Pediatric Neurosurgeons, Lana'i, February, 2007.

Students Advised:

Pritzker School of Medicine, Class of 1998:

Malini Nadig Neurosurgical Residency, Harvard Program in Neurosurgery
Gene Khavkin, Neurosurgical Residency, The University of Chicago

Pritzker School of Medicine, Class of 1999:

Annia Pollack, Neurosurgical Residency, Northwestern University

Pritzker School of Medicine, Class of 2000:

Thomas Manning, Neurosurgical Residency, University of Washington

Pritzker School of Medicine, Class of 2001:

Chong Lee, Neurosurgical Residency, University of Washington

Pritzker School of Medicine, Class of 2003:

Leila Khorsani, Neurosurgical Residency, University of Washington

Pritzker School of Medicine, Class of 2008:

Kimberly Foster,

Courses of Reading and Research; Individual Clinical Clerkships

1996 -1997 Pediatric Neurosurgery Resident Rotation, Ilyas Munshi, M.D.

1997 -1998 Readings in Neurofibromatosis, Malini Nadig, MSIV, Pritzker School of Medicine
Outpatient Clinical Clerkship in Pediatric Neurosurgery, Suzanne Finn, MSII, University of Connecticut School of Medicine

David M. Frim page 40

Pediatric Neurosurgery Resident Rotation, Bakhtiar Yamini, M.D.

1998 – 1999

Readings in Chiari Malformation, Annia Pollack, MSIV, Pritzker School of Medicine
Ad hoc Outpatient Clinical Clerkship in Pediatric Neurosurgery, Ken Nakamura, MSII, Pritzker School of Medicine
Research Laboratory Rotation, Ilyas Munshi, M.D., Neurosurgery Resident
Pediatric Neurosurgery Resident Rotation, Daniel Curry, M.D.

1999 – 2000

Readings in pediatric head trauma, Nora Papasian, MSIV, Pritzker School of Medicine
Outpatient Preceptor, Introduction to Clinical Medicine, Lisa Fagan, MSII, Chicago Medical College
Pediatric Neurosurgery Resident Rotation, Hoang Le, M.D.

2000 - 2001

Advisor, Senior Scientific Symposium Presentation, Nora Papasian, MSIV, Pritzker School of Medicine
Research Preceptor, Readings in Congenital CNS Abnormalities; Lisa Fagan, MSIII, Chicago Medical College
Preceptor, Spring Quarter Elective, Tibor Boco, MSI, Pritzker School of Medicine
Research Laboratory Rotation, Daniel Curry, M.D., Neurosurgery Resident (Recipient of 2002 **Synthes Resident Award** in Brain and Craniofacial Trauma, Congress of Neurological Surgeons)
Pediatric Neurosurgery Resident Rotations, Max Lee, M.D., Paige Church, M.D.

2001 - 2002

Research Laboratory Rotation, Hoang Le, M.D., Neurosurgery Resident
Advisor, Huggins Conference Research Presentation, Daniel Curry, M.D.
Pediatric Neurosurgery Resident Rotations, Christopher Chiang, M.D., Swarupa Nimmagadda, M.D., Marian Brandwyk, M.D.

2002 - 2003

Research Laboratory Rotation, Max Lee, M.D., Neurosurgery Resident
Research Laboratory Rotation, Sandra Cadichon, M.D., Neonatology Fellow
Pediatric Neurosurgery Resident/Fellow Rotations: Christian Sikorsky, M.D., Sandra Cadichon, M.D., Romine Lavanni, M.D., Suanne Daves, M.D.

David M. Frim page 41

Advisor, Senior Scientific Symposium Presentation, Leila Khorasani, MSIV, Pritzker School of Medicine

Advisor, Huggins Conference Research Presentation, Max Lee, M.D.

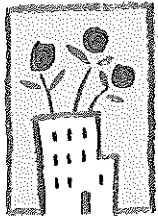
Advisor, Huggins Conference Research Presentation, Reza Yassari, M.D.

Pediatric Neurosurgery Visiting Clinical Fellowship: Yasuo Aihara, Tokyo, Japan

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|-------------|--|
| 2003 – 2004 | Research Laboratory Rotation, Christopher Chiang, M.D., Neurosurgery Resident
Pediatric Neurosurgery Resident/Fellow Rotations: Wael Musleh, M.D. |
| 2004-2005 | Research Laboratory Rotation: E. C. Yili Lim, Beatrice Garber Summer Scholars Endowment Fund Fellow for Undergraduate Honors Thesis research;
Pediatric Neurosurgery Resident/Fellow Rotations: Julian Matiello, M.D.; David Rosen, M.D.; Michael Turner, M.D., Ph.D. |
| 2005-2006 | Pediatric Neurosurgery Resident/Fellow Rotations: David Rosen, M.D.; Michael Turner, M.D., Ph.D.; Malini Narayanan, M.D. (Clinical Pediatric Neurosurgery Fellow) |
| 2006 – 2007 | Research Laboratory Rotations: Melanie McClain, Young Scientist Training Program; Gmerice Hammond, Pritzker School of Medicine, Research Fellow
Pediatric Neurosurgery Resident Rotations: Joseph Hsieh, M.D., M.B.A., Reza Yassari, M.D. |

JUDGE COAR

MAGISTRATE JUDGE ASHMAN

COMER
CHILDREN'S
HOSPITALTHE UNIVERSITY OF
CHICAGOSECTION OF PEDIATRIC
NEUROLOGY

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Neurofibromatosis Clinic 773-834-8064
Night Emergency 773-702-6800

Kenneth Silver, M.D., MSc. FRCPC
Associate Professor of Pediatrics
Program Director, Child Neurology Training Program

August 27, 2007

United States CIS
Nebraska Service Center
850 'S' Street
P.O. Box 87140
Lincoln, NE 68501-7140

RE: MARLER, SEOAN
University of Chicago EB-2 Petition

To Whom It May Concern:

This letter is to support the University of Chicago application on behalf of Seoan Marler, who possesses exceptional ability in the area of science. This letter will give a full review of my ability to review her talent, current work and research, followed by an explanation of what Ms. Marler is able to do in the course of her work and the potential for future contribution.

My position at the University of Chicago Children's Hospital, is Program Director for Child Neurology Training, where I supervise the education of residents who train to become Pediatric Neurologists. The University of Chicago Hospitals have been training child neurologists for over thirty years and their graduates have filled both academic and community based positions throughout the country. My own research involves children with movement and neurogenetic disorders as related to epilepsy. In this capacity I have evaluated, employed, and mentored a great number of trainees over the years. I believe it is this background knowledge and experience that allows me to evaluate Ms. Marler.

Ms. Marler earned her Bachelor Degree in Biological Science, with a specialization in Neurosciences; she also has a Bachelors of Art in Economics from the University of Chicago. She began working in the Pediatric Epilepsy Center, a constituent program of

the Pediatric Neurosciences Center in 2001. She worked at the time as an EEG technician and a part-time research assistant. An EEG technician works to place electrodes in on the scalp of a child undergoing EEG monitoring for the diagnosis and localization of epileptic seizures. This is a critical step in this process of characterization of a seizure disorder and seizure location, as certainly a plan of treatment will be dependent upon those variables. In our Epilepsy Program, the patient may stay up to one week for long-term monitoring and will need to be monitored throughout by the EEG technicians. Upon characterization of the seizures, some patients may be appropriate for a surgical procedure to implant electrodes directly on the suspicious part of the brain cortex in order to potentially diagnose an area that may be removed surgically as the ultimate treatment of the epilepsy. To map the focal point of the seizures, it is necessary to utilize electrodes implanted neurosurgically on the brain surface. Simultaneous EEG records after the surgery to place the electrodes on the brain are also obtained from scalp electrodes. The data garnered from this maneuver can be interpreted by our Pediatric Neuromedical Epilepsy Team to guide or Neurosurgery Team in removing the part of the brain generating epilepsy.

In the course of this critical treatment, a great deal of potentially important research data is generated by the simultaneous recordings of EEG on the brain and the scalp. One question facing our team was whether there was a significant difference in mathematical analysis of the recordings from the intracranial and extracranial electrodes. Another research question is the reliability of the extracranial recordings. This is a critical question for epilepsy treatment, as the question of how valid is the capturing of surface electrode data remains open. The mathematical project in which Ms. Marler was involved used nonlinear systems tools to provide a model showing that the extracranial records were precise enough for patients who are not fit for resective surgery could also benefit without intracranial implantation.

Another critical question that has been investigated by our Pediatric Epilepsy Team is that of whether there are changes in the spectral analysis of the EEG recordings which could lead us to be able to predict many pharmacological agents as well as peripheral nerve stimulator devices to treat the problem. However, there are many classifications whose seizures remain intractable. It is these patients for whom prediction of seizure onset would be of the greatest value, because seizure treatment by prevention would be possible. The laboratory data from the team that collaborated with Ms. Marler, found that there were changes in the interictal activity, the activity between seizures, in the EEG records when comparisons are made between epilepsy patients and normal volunteers. Interestingly enough, abnormalities were also found in the EEG recordings and they applied to the brain not involved in seizure generation. This study remains ongoing and future directions include the monitoring of seizure predictions in patients on various antiepileptic drugs.

A project more specifically involving Ms. Marler involves the collection of human brain tissue from the resective epilepsy surgeries that the surgical team performs. The resected brain needs to be meticulously transported in artificial cerebrospinal fluid that is oxygenated. It is then processed into 400 to 600 micron slices that need to be precisely

cared for before they can be analyzed for cellular activity. Many parameters, including the monitoring of pharmacologic agents, chemical ions, and manipulation of various other parameters, can affect the seizure-generating tissue in the culture environment. At some point, Ms. Marler's work may allow her to use this model to develop a novel treatment for epilepsy based on successful approaches in ex-vivo tissue analysis.

Ms. Marler has also in a separate project developed a seizure model using organotypic culture slices from the mouse neocortex. When cultured, ex-vivo slices of mouse neocortex become excitable, and can be a model for epileptogenesis. By studying these slices, Ms. Marler should be able to look for intervention strategies to arrest or impede the epileptogenesis. Utilizing an inhibitor of that enzyme, the ability for these cultures to develop into epilepsy-generating brain can be inhibited.

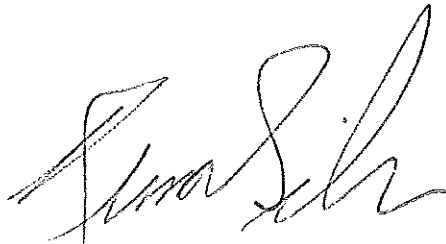
In an additional project, Ms. Marler had been collaborating with members of our Brain Tumor Center to work on the epilepsy that occurs around malignant brain tumors. This is based on the generation of antisense RNA probes to try to inhibit up regulation of specific substances in the brain around the tumor. One potential outcome from this project is to be able to slow down or eliminate proliferation of these malignant tumors. A variety of difficult to master techniques are being employed by Ms. Marler to further this research utilizing both cultured tissue and engineered cell lines. These approaches can be adapted both to epilepsy prevention and maybe even tumor prevention in itself.

It is my belief that Ms. Marler's involvement in the various research projects that are being developed and are ongoing in our Pediatric Epilepsy Center is significant. Her projects have been creative and the techniques that she has employed are examples of special skills and talent. She is certainly an integral part of the research team that has been built here at the hospital and the University. These many talents as well as her enthusiastic and energetic work habits predict that her contribution to neuroscience research and epilepsy research in particular over the coming years will be of very high impact.

I am hoping that she will be allowed to continue this work here in the United States because of her exceptional possibilities for future treatment options based on her contributions.

I would be happy to discuss Ms. Marler's contributions to our research effort at any time in the future.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ken Silver', written over a horizontal line.

Kenneth Silver, M.D., MSc, FRCPC

CURRICULUM VITAE

KENNETH SILVER, M.D., MSc., FRCPC

Comer Children's Hospital
University of Chicago
Department of Pediatrics
5841 S. Maryland Avenue MC/3055
Chicago, Illinois USA 60637
Office: (773) 702-6487
Fax: (773) 702-4786
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Personal Data:

Date of Birth: January 14, 1946
Place of Birth: Montreal, Canada
Citizenship: USA

Education:

B.Sc. Major in Biology Chemistry
Loyola of Montreal 1964-1968

M.Sc. in Cancer Research
University of Saskatchewan 1968-1970

Masters Thesis: Changes in Neoplastic and Electrokinetic
Properties of Ascites Cells in Culture.

M.D. College of Medicine 1970-1974
University of Saskatchewan

Residency Training

Straight Internship Pediatrics -
Children's Health Sciences
Center, Winnipeg, 1974-75

KENNETH SILVER

Senior Resident in Pediatrics - Children's Health Sciences Center, Winnipeg,	1975-76
Resident in Neurology - Montreal General Hospital,	1976
Resident in Electroencephalography - Montreal Children's Hospital,	1977
Resident in Neurology - Montreal Neurological Institute,	1977
Resident in Pediatric Neurology - Montreal Children's Hospital,	1978
Resident in Neuropathology and Electromyography - Montreal Neurological Institute.	1979

Professional Memberships

American Academy of Neurology

Syndicat Professionel des Neurologues du Quebec

American Headache Society

American Academy of Neurology: Child Neurology Section

Royal College Physicians and Surgeons of Canada

Professional Certifications

Corporation Professionnelle des Médecins du Québec	1976 -
Licensure Medical Council Canada (LMCC)	1976 -
Certification Spécialiste Province de Québec; Neurology	1979 -
Certificate American Board of	

KENNETH SILVER

Psychiatry and Neurology; 1980 -
Special Competence in Child Neurology

Fellow, Royal College of Physicians
and Surgeons of Canada 1980 -
State of Illinois Medical License 1997 -

University Appointments

University Lecturer 1979 to 1981
Department of Pediatrics
Department of Neurology and Neurosurgery
McGill University

Assistant Professor 1982 to 1991
Department of Pediatrics,
Department of Neurology and Neurosurgery
McGill University

Associate Professor
Department of Pediatrics, 1992 to 1997
Department of Neurology and Neurosurgery
McGill University

Professor
Department of Neurology 1997 - 2001
Department of Pediatrics
Stritch School of Medicine
Loyola University Chicago

Associate Professor 2001 -
Department of Pediatrics
University of Chicago Pritzker School of Medicine

Hospital and Clinic Appointments

Director of Electromyography,
Montreal Children's Hospital, 1979 - 1997

Attending Staff Neurologist,
Division of Neurology,
Montreal Children's Hospital 1979 - 1997

Consultant Neurologist,
Alexandra Pavilion, M.C.H. 1980 - 1987

Consultant Neurologist,
John Birks and Garry Taylor Centres,

KENNETH SILVER

Montreal	1980 - 1987
Consultant Neurologist, Centre d'Accueil de Longueuil,	1980 - 1987
Consultant Neurologist, Neonatal follow-up clinic, Montreal Children's Hospital	1980 - 1997
Consultant Neurologist, West Island Medical Center, Dollard-Des-Ormaux	1988 - 1997
Consultant Neurologist, Dorsal Rhizotomy clinic, Shriner's Hospital, Montreal	1990 - 1997
Consultant Neurologist, Dreyer Medical Clinic, Aurora, IL	1997 - 1998
Research Associate Division of Neurology Montreal Children's Hospital	1997 - 2000
Chief, Section of Pediatric Neurology Attending Staff Neurologist, Loyola University Medical Center and Ronald McDonald Children's Hospital	1997 - 2001
Associate Staff, Gottlieb Memorial Hospital, Melrose Park, IL	1998 - 2000
Director, Spasticity Clinic DuPage Easter Seals/LUMC Villa Park, IL	1998 - 2001
Co-Director Neurogenetics Clinic Loyola University Medical Center	1999 - 2001
Associate Staff, Hinsdale Hospital	

KENNETH SILVER

Hinsdale, IL 1998 -

Consultant Neurologist
Shriners Hospital
Chicago, IL 1998 -

Attending Staff Neurologist
Comer Children's Hospital
at The University of Chicago 2001 -

Co-Director 2002-
Neurogenetics Clinic University of Chicago Children's Hospital

Member of Hospital and Professional Committees

External Examiner, Master and PhD candidates, School of Physical and Occupational Therapy, McGill.

Montreal Neurological Institute, Resident Training
Subcommittee on outpatient clinics, 1990.

Montreal Children's Hospital, Clinical Ethics Committee,
1990 to 1992.

Montreal Children's Hospital Medical, Dental and Pharmaceutical
Evaluation Committee, 1990 to 1995.

Subcommittee on Teratogenesis of new anticonvulsant medication.
Canadian League against Epilepsy.

Committee of Indemnification, Ministry of Health and Social
Service, Government of Quebec.

Representative to the media; Association des Neurologues du Quebec.

Consultant Pediatric Neurologist to Health Consulting Group,
International Medical Services, Buenos Aires, Argentina.

Peripheral Neuromuscular Committee for Neuroscience Integration,
McGill University Health Center.

Addiction Rehabilitation Association, Board of Directors.

External Reviewer:

Cambridge Quarterly of Healthcare Ethics
The Hospital for Sick Children Foundation

KENNETH SILVER

March of Dimes Birth Defects Foundation
Journal of Clinical Neurophysiology
Journal of Developmental and Behavioural Pediatrics

Consultant Neurologist to IMPACT Study (Hospital Based Active Surveillance System for Vaccine-Associated Adverse Events).
Health and Welfare Canada.

Medical Advisory Board: Alternating Hemiplegia of Childhood Foundation.

Department of Neurology
Loyola University Chicago

- A) Neurology Executive Committee.
- B) Faculty Promotion Committee.
- C) Graduate Education Committee.
- D) Residency Selection Committee.
- E) Loyola University Physician Foundation.
- F) Program Director, Pediatric Neurology Residency Program.

Loyola University Physicians Foundation System Development and Network Committee 1997 - 1999

Medical Advisory Committee, Naperville Community Unit School District 203.

Association of University Professors of Neurology.

Examiner, American Board of Psychiatry and Neurology, Inc.

Moderator and Organizer of the Chicago Pediatric Neurology Consortium.

Co-organizer of the Annual Midwest Alternating Hemiplegia of Childhood Meeting.

Program Director: Pediatric Neurology Residency Program, University of Chicago.

Member, Residency Committee, Department of Neurology, University of Chicago.

Member, Association of Pediatric Program Directors

KENNETH SILVER

AWARDS

Neurophysiological studies in human spasticity.
Laboratory of Professor E. Pierrôt-Deseillgny.
Hôpital de la Salpêtrière, Paris France.
INSERM-FRSQ Oct.- Nov.1995.
France-Quebec Health Research Scholarship.

Teacher Of The Year - 2005
Department of Neurology
University of Chicago

Neurology on the Hill Program. Advocate for the American Academy
of Neurology to United States Senators and Congressmen.
Washington, D.C. - May 2006

Special Clinical Skills:

- 1) Pediatric EMG (more than 3,500 cases)
- 2) Evaluation and treatment of patients with spasticity.
 - a) Intraoperative monitoring during Rhizotomy surgery.
 - b) Monitoring and programming of intrathecal baclofen pumps.
 - c) Botulinum toxin intramuscular injections.
- 3) Monitoring and programming Vagal Nerve Stimulator for treatment of childhood epilepsy.

KENNETH SILVER

**TEACHING ACTIVITIES in Pediatrics and Neurology at The University
Chicago Pritzker School of Medicine**

1 - Program Director for the Child Neurology Training Program

Monitoring the quality of the program
Provide leadership and supervision of the residents
Provide and supervise educational program
Monitor resident performance

2 - Neurology Residents

Direct supervision of training of adult neurology residents in the
Neurological Training Program during 3 month rotation in Child
Neurology.

3 - Pediatric Residents

Direct supervision of Pediatric Residents in the Pediatric Training
Program.

Supervision of pediatric and medicine-pediatric residents in the
outpatient neurology clinics.

4 - Medical Students

Supervision of students rotating in Pediatric Neurology Program.

5 - Lectures

Provide lectures in core Pediatric Neurology curriculum for
residents in Neurology and Pediatrics.
Participate in weekly Pediatric Neurology Rounds.
Participate in Subspecialty Neurology and Pediatric Grand Rounds.

KENNETH SILVER

RESEARCH WORK IN PROGRESS

Project 1.

Alternating hemiplegia of childhood is a rare syndrome of recurrent attacks of paralysis which persist throughout life and is associated with psychomotor retardation and movement disorder. The etiology, long term outcome and effective treatment remains to be determined. In collaboration with Dr. Fred Andermann MNI, we have been studying a group of patients with this syndrome. Studies have included a) response to treatment with Flunarizine b) hereditary aspects including familial cases with Kathryn Swoboda, University of Utah.

Project 2.

a) In collaboration with Dr. Eva Andermann, Neurogenetics unit at Montreal Neurological Institute, we are investigating the teratogenic effects of anticonvulsant medication on offspring of epileptic mothers. In an ongoing, prospective, controlled blinded study these children are assessed for evidence of malformations, neurological abnormalities and developmental retardation.

b) A second phase of this study is the detailed neuropsychological and behavioural evaluations of these children in collaboration with the departments of psychology at the Montreal Children's Hospital and Montreal Neurological Institute (Dr. G. Leonard). This was a FRSQ funded study (160,000 dollars for the years 1993-1995)

KENNETH SILVER

ON-GOING CLINICAL TRIALS

K. Silver, Sub-Principle Investigator

UCB PHARMA

A Multi-Center, Open-Label, Long-Term Follow-Up Study Of The Safety And Efficacy Of Levetiracetam In Children With Partial Onset Seizures. March 29,2005-March 28, 2007

A Double-Blind, Randomized, Multicenter, Placebo-Controlled, In-Patient, Maximum 34 Day Study of Levetiracetam Oral Solution (20-50 mg/kg/day) as Adjunctive Treatment of Refractory Partial Onset Seizures in Pediatric Epileptic Subjects Ranging in Age From 1 Month to Less Than 4 Years of Age. 3/22/05-3/21/07

GSK

A Multi-Center, Double-Blind, Randomized Conversion to Monotherapy Comparison of Two Doses of Lamotrigine for the Treatment of Partial Seizures. 2/6/06-11/7/08

UCH

Peds Sleep Questionnaire: Normalization and Validation Study. On-going.

Peds Sleep Questionnaire: Use for Collection of Clinical Data On- Going

Rare Diseases Clinical Research Network: Member Angelman, Rett and Prader-Willi Syndrome Consortium.

Other Funded Research:

1. Principle Site Investigator: International Multicenter Study of Oral Sumatriptan (Imitrex) for the acute treatment of migraine headaches in adolescence; Study I: blinded placebo controlled study on efficacy and safety. Study II: open label long-term study on efficacy and tolerability. 1995 - 1996.
2. Principle Site investigator; International Multicenter double-blind placebo controlled study with Oxcarbazepene (Trileptal)

KENNETH SILVER

in children with inadequately controlled partial onset seizures. 1996 - 1997.

3. Gabapentin Pediatric Add-On Trial; A Randomized, Double-blind, Placebo-Controlled, Parallel-Group, Multicenter Study in Patients With Partial Seizures. 1998 - 2000.

- a) Topamax Monotherapy Comparison trial to standard monotherapy in newly Diagnosed Epilepsy
- b) Extension of Randomly Double-blind Parallel Multicenter trial. Compare Efficiency and Safety of Topamax as monotherapy 1999-2000

BIBLIOGRAPHY

Original Peer Reviewed Articles

Schmidt B, Watters GV, Rosenblatt B, Silver K. **Increased Head Circumference in Patients With Duchenne Muscular Dystrophy**. Annals of Neurology 1985;17:620-621.

Piper MC, Kunos VI, Willis DM, Mazer BL, Ramsay M, Silver, K. **Early Physical Therapy Effects on the High Risk Infant: A Randomized Controlled Trial**. Pediatrics 1986;78:216-224.

Paltiel HJ, O'Gorman M, Meagher-Villemure K, Rosenblatt B, Silver K, Watters GV. **Subacute Necrotizing Encephalomyelopathy (Leigh Disease): CT Study-1**. Radiology 1987;162:115-118.

Piper MC, Mazer B, Silver K, Ramsay M. **Resolutions of Neurological Symptoms in High Risk Infants During the First Two Years of Life**. Developmental Medicine and Child Neurology 1988;30 :26-35.

Shevell M, Silver K, O'Gorman AM, Watters GV, Montes J. **Neonatal Dural Sinus Thrombosis**. Pediatric Neurology 1989;5:161-165.

Halal F, Silver K. **Slowly Progressive Macrocephaly With Hamartomas: A New Syndrome**. American Journal of Medical Genetics 1989;33:182-185.

KENNETH SILVER

Marchal G, Andermann F, Tampieri D, Robitaille Y, Melanson D, Sinclair B, Olivier A, Silver K, Langevin P. **Generalized Cortical Dysplasia Manifested by Diffusely Thick Cerebral Cortex**. Arch Neurology 1989;46:430-434.

Shevell M, Rosenblatt B, Silver K, Carpenter S, Karpati G. **Congenital Inflammatory Myopathy**. Neurology, 1990;40:1111-1114.

Matthews PM, Tampieri D, Berkovic S, Andermann F, Silver K, Arnold DL, Chitayat D. **Magnetic Resonance Imaging Shows Specific Abnormalities in The MELAS Syndrome**. Neurology 1991;41:1043-1046.

Chitayat D, Meunier CM, Hodgkinson K A, Silver K, Flanders M, Anderson IJ, Little JM, Whiteman D.A.H, Carpenter S. **Mucopolidosis Type IV: Clinical Manifestations and Natural History**. American Journal of Medical Genetics 1991;41:313-318.

Halal F, Silver K. **Syndrome of Microcephaly, Brachmann-De Lange Like Facial Changes and Developmental Delay**. American Journal of Medical Genetics 1992;42:381-386.

Chitayat D, Silver K, Azouz ME. **Skeletal Dysplasia with Intracerebral Calcifications, Optic Atrophy, Hearing impairment and Mental Retardation Neurology of Dysostosis**. American Journal of Medical Genetics 1992;43:517-525.

Chitayat D, Meagher-Villemure K, Mamer O, O'Gorman A, Hoar D, Silver K, Sriver C. **Brain Dysgenesis and Congenital Intracerebral Calcifications associated with 3-Hydroxyisobutyric Aciduria**. Journal of Pediatrics 1992;121:86-89.

DerKaloustian VM, McIntosh N, Silver K, Blaichman S, Halal F. **Unilateral radio-ulnar synostosis, generalized hypotonia, developmental retardation, and characteristic facial appearance in sibs: A new syndrome**. American Journal of Medical Genetics 1992;43:942-945.

Silver K, Andermann F. **Alternating Hemiplegia of Childhood: A Study of 10 patients and results of Flunarizine treatment**. Neurology 1993;43:36-41.

Shevell M, Rosenblatt B, Silver K. **Inflammatory Myopathy and Walker-Warburg Syndrome: Etiologic Implications**. Canadian Journal

KENNETH SILVER

Neurological Sciences 1993;20:227-229.

Shevell M, Silver K, Watters G, Rosenblatt B. **Transient Oculosympathetic Paresis (Group II Raeder's Paratrigeminal Neuralgia) of Childhood: A Migraine Variant.** Pediatric Neurology 1993;9:289-292.

Arnold D, Silver K, Andermann F. **Evidence of Mitochondrial Dysfunction in Patients with the Syndrome of Alternating Hemiplegia of Childhood.** Annals of Neurology 1993;33:604-607.

Mathews PM, Andermann F, Silver K, Karpati G, Arnold DL. **Proton MR spectroscopic characterization of differences in regional brain metabolic abnormalities in mitochondrial encephalomyopathies.** Neurology 1993;43 (12):2484-2490.

Arnold D, Matthews P, Shoubbridge E, Andermann F, Silver K, Karpati G. **Proton MR Spectroscopy Demonstration of Differences in Regional Brain Metabolism Abnormalities in Mitochondrial Encephalopathies.** Neurology 1993;43:2484-2490.

Lopes-Cendes I, Silver K, Andermann E. **Neurological Development in Children of Women with Epilepsy.** Ictal (England) 1994.

Decell MK, Gordon JB, Silver K, Meagher-Villemure K. **Fulminant Hepatic Failure associated with Status Epilepticus in Children: Three cases and a review of potential mechanisms.** Intensive Care Medicine 1994;20:375-378.

Hart Y, Cortez M, Andermann F, Hwang P, Fish DR, Dulac O, Silver K, Fejerman N, Cross N, Sherwin A, Carabello R. **The Medical Treatment of Rasmussen's Syndrome (chronic encephalitis and epilepsy) Effect of high dose steroids and/or immunoglobulins in 19 patients.** Neurology 1994;44:1030-1036.

Andermann E, Andermann F, Silver K, Arnold D, Levin S. **Benign Familial Nocturnal Alternating Hemiplegia of Childhood.** Neurology 1994;44:1812-1814.

Pratt VM, Boyadjiev S, Dlouhy SR, Silver K, Der Kaloustian VM, Hodes ME. **Pelizaeus-Merzbacher disease in a family of Portuguese origin caused by a point mutation in exon 5 of the proteolipid**

KENNETH SILVER

protein gene. American Journal of Medical Genetics, 1995;55(4):402-4.

Cendes F, Andermann F, Silver K, Arnold D. **Imaging of Axonal Damage in Vivo in Rasmussen's Syndrome.** Brain 1995; 118: 753-758.

Otero LJ, Brown GK, Silver K, Arnold DL, Matthews PM. **Association of Cerebral Dysgenesis and Lactic Acidemia with an X-linked Pyruvate Dehydrogenase (PDH) E1-Alpha Subunit Mutation in a Female.** Pediatric Neurology 1995;13:327-332.

Wein T, Andermann F, Silver K, Dubeau F, Andermann E, Rourke-Frew F, and Keene D. **Exquisite Sensitivity of Paroxysmal Kinesigenic Choreoathetosis to Carbamazepine.** Neurology 1996; 47:1104-1106.
Comments: Neurology 1997 Aug;49(2)642.

Superstein R, Miller S, Kavalec C, Silver K, Koonekoop R.K, **Ocular Juvenile Myasthenia Gravis-The Masquerader: A Report of three Cases and a Review of the disorder.** Ophthalmic Practice 1998 16:(4)174-176.

Silver K, Andermann F, Meagher-Villemure K. **Familial Alternating Epilepsia partialis Continua with Chronic Encephalitis: A variant of Rasmussen's Syndrome?** Archives of Neurology 1998;55:733-736.

Miller SP, Shevell M, Rosenblatt B, Silver K, O'Gorman A M, Andermann F. **Bilateral Perisylvian Polymicrogyria Presenting as Congenital Hemiplegia.** Neurology 1998;50:1866-1869.

Graham G, Silver K, Arlet V, DerKaloustian V. **King Syndrome: Further Clinical Heterogeneity and Review of Literature.** American Journal of Medical Genetics 1998; 78(3): 254-259.

Miller S, Shevell M, Silver K., Kramer M. **The Diagnostic Utility of the Nerve-Muscle-Skin-Biopsy in Pediatric Neurology Practice.** Pediatric Rehabilitation 1998;2(2): 95-100.

Collins KA. Eydoux P. Duncan A. M. Ortenberg J. Silver K. Der Kaloustian VM. **Phenotypic Manifestation in a Child with 46,X,der (X)t(X;1) (q24;q31.1).** American Journal of Medical Genetics. 2000 91 (5): 345-7

KENNETH SILVER

Gerreiro MM. Andermann E. Gerrini R. Dobyns WB. Kuzniecky R. Silver K. Van Bogart P. et al, **Familial Perisylvian Polymicrogyria: A new Familial Syndrome of Cortical Maldevelopment.** Annals of Neurology 2000 48 (1):39-48.

Arbour L, Silver, K. Hechtman P, Coulter-Mackie M, Tracey E. **Variable Onset Metachromatic Leukodystrophy in a Vietnamese Family.** Pediatric Neurology 2000: 23(2) 173-600

Mittal S, Farmer JP, Poulin C, Silver K. **Reliability or Intraoperative electrophysiological monitoring in selective posterior rhizotomy.** Journal of Neurosurgery; 2001; 95: 67-75

Chawla J, Sucholeiki R, Jones C, Silver K. **Intractable Epilepsy with Ring Chromosome 20 Syndrome Treated with Vagal Nerve Stimulation: Case Report and Review of the Literature.** Journal of Child Neurology; 2002; 17(10):778-800.

Swoboda KJ, Kanavakis E, Xaidara A, Johnson JE, Leppert MF, Schlesinger-Massart MB, Ptacek LJ, Silver K, Youroukos S. **Alternating Hemiplegia of Childhood or Familial Hemiplegic Migraine? A Novel ATP1A2 Mutation.** Annals of Neurology; 2004 55(6): 884-887.

MacLeod H. Pytel P, Wollmann R, Chelmicka-Schorr E, Silver K, Anderson RB, Waggoner D, McNally E. **A Novel Mutation in Congenital muscular Dystrophy disrupts the Dystrophin Glycoprotein Complex** (Submitted)

Jansen A, Cao H, Kaplan P, Silver K., Leonare S, Veilleux, M, Andermann E, **Identification of Three Novel Mutations in the GNS Gene Causing Sanfillippo Syndrome type D.** (In Press: Archives of Neurology 2007)

KENNETH SILVER

Book Chapters

IN: Andermann F, Aicardi J, Vigevano F, ed. **Alternating Hemiplegia of Childhood**. Raven Press, New York 1995.

Chapter 2. Silver K, Andermann F. **Alternating Hemiplegia of Childhood: The Natural History of the disorder in a group of 10 patients**, p19-28.

Chapter 15. De Stefano N, Silver K, Andermann F, Arnold D. **Mitochondrial Dysfunction in Patients with Alternating Hemiplegia of Childhood: Fluctuation over time in relation to clinical state** p115-122.

Chapter 17. Andermann E, Andermann F, Silver K, Levin S, Arnold D. **Benign Familial Nocturnal Alternating Hemiplegia of Childhood** p145-149.

Chapter 20. Silver K, Scriver C, Arnold D, Robinson B, Andermann F. **Alternating Hemiplegia of Childhood associated with mitochondrial disease: A deficiency of pyruvate decarboxylase** p165-171.

Chapter 24. Silver K, Andermann F. **Alternating Hemiplegia: Treatment with Flunarizine** p195-198.

Chapter 28. Aicardi J, Bourgeois M, Fusco L, Vigevano F, Silver K, Andermann F. **Alternating Hemiplegia of Childhood: An Overview**. p207-212.

IN: Wolf P, ed. **Epilepsian Book, Biochemistry of the Epilepsy**. Gruyter, Berlin, New York. Hart Y, Andermann F, Fish D, Cortez M, Hwang P, Silver K, Fejerman N, Sherwin A. **The Medical Treatment of Chronic Encephalitis and Epilepsy** 1995.

Published Abstracts

KENNETH SILVER

Watters GV, Rosenblatt B, Metrakos K, Silver K. **Rett's Syndrome** Canadian Journal of Neurological Sciences 1984;11:387.

St-Hilaire MH, Andermann F, Silver K, Hakim A, Morris N. **Paroxysmal Alternating Hemiplegia in Infancy; Treatment with Calcium Channel Blockers**. Canadian Journal of Neurological Sciences 1985;14.

Andermann F, Silver K, St.Hilaire MH. **Paroxysmal Alternating Hemiplegia of Childhood: Treatment with Flunarizine and Other Agents**. Neurology 1986;36:327.

Beaulieu M, Watters GV, Ethier R, O'Gorman AM, Metrakos K, Silver K, Rosenblatt B. **Cranial Magnetic Resonance Imaging in Struge Weber Syndrome** Canadian Journal of Neurological Sciences 1987;14:234.

Shevell M, Silver K, O'Gorman AM, Watters GV, Montes J. **Neonatal Dural Sinus Thrombosis**. Neurology 1988;38:163.

Shevell M, Rosenblatt B, Silver K, Carpenter S, Karpati G. **Congenital Inflammatory Myopathy**. Canadian Journal of Neurological Sciences 1989;16:242.

Silver K, Andermann F, Kilpatrick J. **Alternating Hemiplegia of Infancy: Results of 5 Yr Treatment with Flunarizine and Prognosis**. Neurology 1991;41:267.

Lamoureux D, Silver K, Hodgkinson K, Chitayat D, Goodyer P. **Spectrum of Mitochondrial Encephalomyopathies**. Canadian Journal of Neurological Science 1991;18:220.

Silver K, Siavalas E, Andermann E, Lopes-Cendes I. **Outcome of Children Born to Epileptic Mothers: A Prospective Blinded Study**. Neurology 1992;42:287.

Carmant L, Veilleux M, Silver K, Vanasse M, Watters G, Rosenblatt B. **Longterm follow-up of patients with Giant Axonal Neuropathy: Sensory, Motor and Autonomic Dysfunction**. Neurology 1992;42:287.

Shevell M, Silver K, Watters G. **Transient Oculosympathetic Paresis (Group II Raeder's Paratrigeminal Neuralgia) of Childhood: A Migraine Variant**. Annals of Neurology 1992;32:484.

KENNETH SILVER

Silver K, Lopes-Cendes I, Siavales L, Andermann E. **Risk Factors for Abnormal Neurological Development in offspring of Epileptic Women on Anticonvulsant Drugs.** American Journal of Human Genetics 1992;51:A1-23.

Lopes-Cendes I, Silver K, Siavalas L, Andermann E. **Head Circumference in Offspring of Epileptic Women.** Canadian Journal of Neurological Sciences 1993;20:S39.

Silver K, Lopes-Cendes I, Siavalas L, Andermann E. **Minor Anomalies in Offspring of Epileptic Women; A Controlled Blinded Study.** Canadian Journal of Neurological Sciences 1993;20:S39.

Ben-Zeev B, Chitayat D, Robinson B, Silver K. **Brain Dysgenesis and Inborn Errors of Metabolism.** Canadian Journal of Neurological Sciences 1993;20:S35.

Arnold D, Matthews P, Shoubbridge E, Andermann F, Silver K, Karpati G. **Proton MR Spectroscopy Demonstration of Differences in Regional Brain Metabolic Abnormalities in Mitochondrial Encephalopathies.** Neurology 1993;43:A375.

Lopes-Cendes I, Silver K, Andermann E. **Evaluation of Neurological Development in Offspring of Epileptic Women.** Epilepsia 1993;34:144.

Silver K, Andermann F, Arnold D. **Evidence of Mitochondrial dysfunction in patients with Alternating Hemiplegia of Childhood** Neurology 1993;43:A284.

Pratt VM, Boyadjev S, Dlouhy S, Silver K, DerKaloustian V, Hodes ME. **Pelizaeus-Merzbacher disease in a family of Portuguese origin caused by a point mutation in exon 5 of the PLP gene.** American Journal of Human Genetics 1993;52.

Cendes F, Andermann F, Silver K, Arnold D. **Imaging of Neuronal Damage in Chronic Encephalitis and Epilepsy: Rasmussens Syndrome.** Neurology 1994;44 A350.

Otero L, Brown R, Brown G, Matthews P, Silver K, Arnold D. **Association of Cerebral Dysgenesis and Lactic Acidemia with X-linked Pyruvate Dehydrogenase E1 α Subunit Mutation in Females.** Neurology 1994;44 A209.

KENNETH SILVER

Andermann E, Andermann F, Silver K, Arnold D, Levin S. **Benign Familial Nocturnal Alternating Hemiplegia of Childhood: A migraine related disorder?** Neurology 1994;44 A169.

Silver K, Scliver C, Arnold D, Robinson B. **Alternating Hemiplegia of Childhood associated with Mitochondrial disease. Deficiency of Pyruvate Decarboxylase.** Neurology 1994;44 A210.

Silver K, Leonard G, Petitto S, Daignault S, Schopflocher C, Lopes-Cendes I, Andermann E. **Cognitive and Motor Effects of Anticonvulsant Drug Therapy During Pregnancy on School-Age Offspring.** Neurology 1995;45:A179.

Wein T, Andermann F, Silver K, Andermann E, Dubeau F. **Exquisite Sensitivity of Paroxysmal Kinesigenic Choreoathetosis to Carbamazepine.** Epilepsia 1995;36:151.

Andermann E, Leonard G, Petitto S, Daignault S, Schopflocher C, Lopes-Cendes I, Silver K. **Cognitive and Motor Effects of Anticonvulsant Drug Therapy During Pregnancy on School-Age Offspring.** Epilepsia 1995;36:91.

Leonard G, Ptito A, Seni MH, Vinette M, Schopflocher C, Daignault S, Lopes-Cendes I, Silver K, Andermann E. **Cognitive Outcome in School-age Offspring of Epileptic Mothers Exposed to Anticonvulsant (AED) Therapy During Pregnancy.** Neurology 1996; 46:A150.

Poulin C, Matthews P, Genge A, Eydoux P, Shevell M, Vanasse M, Silver K, **Childhood Hereditary Neuropathy With Liability to Pressure Palsy.** Annals of Neurology 1996;40:327-328

Miller S, Shevell M, Silver K, **The Diagnostic Utility of The Nerve-Muscle-Skin-Biopsy in Pediatric Neurology Practice.** Annals of Neurology 1996;40:328

Silver K, Ohtsuka Y, Lopes-Cendes I, Andermann E. **Neurological and Developmental Abnormalities in the Offspring of Epileptic Mothers.** Epilepsia 1997;38:252

Miller S P, Shevell M, Rosenblatt B, Silver K, O'Gorman AM, Andermann F. **Bilateral Perisylvian Polymicrogyria Presenting as Congenital Hemiplegia: A report of three cases.** Annals of Neurology 1997;42:330.

KENNETH SILVER

Guerreiro M, Andermann E, Guerrini R, Dobyns W, Silver K, et al. **Familial Perisylvian Polymicrogyria.** Neurology 1998;50:A447.

Mills E L, Silver K, and the Members of IMPACT. **Acute Flaccid Paralysis in Children: An Active Surveillance Multicenter study.** Neurology 1998;50:A15-A16.

Silver K, Mills E L, and the Members of IMPACT. **Infantile Spasms: An Active Surveillance Multicenter Study.** Neurology 1998;50:A14-A15.

Akhtar A, Tseng A, Silver K, Goldberg K, Agrawal R, **Pediatric Tacrolimus-Induced Neuro Toxicity.** Annals of Neurology 1998; 44(3) 577.

Silver K, Zifkin B, **Neonatal Touch-Induced Reflex Seizures.** Neurology 1999; 55, A417

Suwan N, Silver K, Horwitz S. **A New Reversible Leukoencephalopathy With Bilateral Anterior Temporal Lobe Cysts.** Annals of Neurology 1999;46:543.

Silver K, Suwan N, Rita D, Walsh C. **Familial Bilateral Periventricular Nodular Heterotopia In a Boy.** Annals of Neurology 1999;46:547.

Ohtsuka, Y, Silver K, Lopes-Cendes, Andermann E, Tsudat, **Effect of Antiepileptic Drugs on Psychomotor Development in offspring of Epileptic mothers.** Epilepsia 1999; 40-296.

Silver K, Horowitz, S; Suwan, N, **A new reversible Leukoencephalopathy with Bilateral Anterior Temporal Lobe Cysts.** Journal of Neurological Sciences 2001; 187, s325.

Silver K, Penn R, Huttenlocher P. **Pallidotomy is an Effective Treatment for Malignant Movement Disorder in Neuronal Ceroid Lipofuscinosis** Revista de Neurologia 2003; 36 (5) 497

Silver K, **Alternating Hemiplegia of Childhood: Pathophysiology and Treatment Stratagies** Revista de Neurologia 2003; 36 (5) 472

Lewandowski ER, Leonard G, Ptito A, Silver K, Andermann E. **Effect**

KENNETH SILVER

of In-Utero Exposure to Antiepileptic Medication on the Cognitive Abilities of School Age Children. Epilepsia 2005; 46(8) 260-261

Reviews

Silver K, Book Review: **North K, Neurofibromatosis in Childhood.** MacKeith Press 1997, Neurological Sciences (1999).

Presentations, Invited Lectures, Etc.

Beaulieu M, Watters GV, Ethier R, O'Gorman AM, Metrakos K, **Silver K**, Rosenblatt B. **Cranial Magnetic Resonance Imaging in Struge Weber Syndrome.** Canadian Congress of Neurological Sciences, Vancouver, June 1984.

Watters GV, Rosenblatt B, Metrakos K, **Silver K**. **Rett's Syndrome.** Canadian Congress of Neurological Sciences, June 1984.

St-Hilaire M, Andermann F, **Silver K**, Hakim A, Morris N. **Paroxysmal Alternating Hemiplegia in Infancy: Treatment with Calcium Channel Blockers.** Canadian Congress of Neurological Sciences, Toronto, June 1985.

Paltiel HJ, O'Gorman M, Meagher-Villemure K, Rosenblatt B, **Silver K**, Watters GV. **Subacute Necrotizing Encephalomyelopathy (Leigh Disease): Ct Study-1.** North American Radiological Society Meeting, Chicago November 1985.

Andermann F, **Silver K**, St-Hilaire M. **Paroxysmal Alternating Hemiplegia of Childhood Treatment with Flunarizine and other agents.** American Academy of Neurology. New Orleans, April 1986.

Shevell J, **Silver K**, O'Gorman AM, Watters GV, Montes J. **Neonatal Dural Sinus Thrombosis** American Academy of Neurology, Cincinnati, April 1988.

Meagher-Villemure K, **Silver K**, O'Gorman AM. **Homocystinurea with Spongy Degeneration of White Matter.** Canadian Association of

KENNETH SILVER

Neuropathologists, Ottawa 1989.

Shevell M, Rosenblatt B, Silver K, Carpenter S, Karpati G. **Congenital Inflammatory Myopathy**. Canadian Congress of Neurological Sciences, Ottawa, June 1989.

Silver K, Andermann F, Kilpatrick J. **Alternating Hemiplegia of Infancy: Results of 5 Yr Treatment with Flunarizine and Prognosis**. American Academy of Neurology, Boston April 24, 1991

Lamoureux D, Silver K, Hodgkinson K, Chitayat D, Goodyer P. **Spectrum of Mitochondrial Encephalomyopathies**, Canadian Congress of Neurological Sciences, Halifax June 20, 1991.

Epilepsy in Childhood. Pediatrics Grand Rounds, Montreal Children's Hospital. June 1991.

Krantz I, Chitayat D, Silver K, Watters VG, Karpati G, Carpenter S. **Congenital Hypomyelinating and Amyelinating Polyneuropathies: The Dejerine - Sottas Syndrome**. Presented at the 23rd Annual March of Dimes Clinical Genetics Conference, July 1991.

Chitayat D, Lamoureux D, Silver K, Hodgkinson K, Goodyer P. **Clinical and Biochemical Investigation of Mitochondrial Diseases. Report on 22 Cases**. Presented at the 23rd Annual March of Dimes Clinical Genetics Conference, Vancouver, July 1991.

Watters GV, O'Gorman AM, Rosenblatt B, Silver K. **Brain dysgenesis in Inuit children from The Northeastern Arctic Regions: Is there an increased incidence of schizencephaly?**. Presented to Child Neurology Society Meeting, Portland, OR., October 1991.

Watters GV, Lambert R, Rosenblatt B, Silver K, Carmant L. **Retts Syndrome: SPECT Scan (Single Photon Emission Computerized Tomography) Abnormalities, changes with age and seizure activity**, Presented at Child Neurology Society Meeting, Portland, OR., October 1991.

Macintosh N, Blaichman S, Silver K, Der Kaloustian VM. **Unilateral radio-ulnar synostosis, generalized hypotonia, developmental retardation, and a characteristic facial gestalt in siblings: A New Syndrome**. Presented at the 8th International Congress of Human

KENNETH SILVER

Genetics, Washington D.C., October 1991.

Der Kaloustian V, Chitayat D, Moser A, Schreiber R, Chen G, McGuinness M, Polomeno R, Silver K. **A New Variant of Peroxisomal Disorder**. Presented at the 8th International Congress of Human Genetics, Washington D.C., October 1991.

Headaches in the Emergency Room. Emergency Department Rounds, Montreal Children's Hospital. November 1991.

Invited Speaker, International Workshop on Alternating Hemiplegia of Childhood, Presented in Rome, Italy, January 1992.

1. **Clinical Features**
2. **Treatment with Flunarizine.**

Treatment of Spasticity in Children. Neurology Grand Rounds. Montreal Neurological Institute. March 1992.

Treatment of Spasticity in Children. Pediatric Grand Rounds Montreal Children's Hospital. May 1992.

Carmant L, Veilleux M, Silver K, Vanasse M, Watters G, Rosenblatt B. **Longterm follow-up of patients with Giant Axonal Neuropathy: Sensory, Motor and Autonomic Dysfunction**. Presented to American Academy of Neurology, San Diego May 1992.

Silver K, Siavalas E, Andermann E, Lopes-Cendes I. **Outcome of Children Born to Epileptic Mothers: A Prospective Blinded Study**. Presented to American Academy of Neurology, San Diego May 1992.

Shevell M, Silver K, Watters G. **Transient Oculosympathetic Paresis (Group II Raeder's Paratrigeminal Neuralgia) of Childhood: A Migraine Variant**. Presented at the meeting of the Child Neurology Society. New Orleans, October 1992.

Silver K, Lopes-Cendes Il, Siavalas L, Andermann E. **Risk Factors for Abnormal Neurological Development in Offspring of Epileptic Women on Anticonvulsant Drugs**. Presented to the American Society of Human Genetics, San Francisco, November 1992.

Gillian-Barre Syndrome Emergency Department Rounds, Montreal Children's Hospital. December 1992.

Disorders of Neuronal Migration. Neurology Grand Rounds, Montreal

KENNETH SILVER

Neurological Institute, February 1993.

Invited speaker, Cephalée chez l'enfant Practical Problems in Pediatrics, 1993 Update. McGill University. February 1993.

Arnold D, Matthews P, Shoubbridge E, Andermann F, Silver K, Karpati G. **Proton MR Spectroscopic Demonstration of Differences in Regional Brain Metabolic Abnormalities in Mitochondrial Encephalomyopathies.** Meeting of the American Academy of Neurology, New York, April 1993.

Silver K, Arnold D, Andermann F. **Evidence of mitochondrial dysfunction in patients with alternating hemiplegia of childhood.** Meeting of the American Academy of Neurology, New York, April 1993.

Invited speaker, The Neurological Sequelae following Mild Head Injury in Children. Head Injury Symposium, Montreal Children's Hospital. April 1993.

Alternating Hemiplegia of Childhood. Pediatric Grand Rounds, Montreal Children's Hospital, April 1993.

Dorsal Rhizotomy Surgery for the Treatment of Spastic Diplegia in Children. Grand Rounds, Shriner's Hospital June 1993.

Silver K, Lopes-Cendes I, Siavalas L, Andermann E. **Minor Anomalies in Offspring of Epileptic Women; A Controlled Blinded Study.** Presented at the Canadian Congress of Neurological Sciences, Toronto June 1993.

Lopes-Cendes I, Silver K, Siavalas L, Andermann E. **Head Circumference in Offspring of Epileptic Women.** Presented at the Canadian Congress of Neurological Sciences, Toronto June 1993.

Neurological Development in Children of Women with Epilepsy. Lopes-Cendes I, Silver K, Andermann E. 20th International Epilepsy Congress, Oslo Norway July 1993.

Surgical Treatment of Spasticity and Investigations of Evoked Spinal Reflexes. McGill Neuromuscular Rounds, Montreal Children's Hospital September 1993.

Pelizaeus-Merzbacher Disease. McGill Genetics Rounds, Montreal Children's Hospital October 1993.

KENNETH SILVER

Pediatric Neuromuscular Diseases: Current Concepts, Pediatric Residents seminars, McGill March 1994.

Silver K, Scriver C, Arnold D, Robinson B. **Alternating Hemiplegia of Childhood associated with Mitochondrial disease. Deficiency of Pyruvate Decarboxylase**. Meeting of the American Academy of Neurology, Washington DC May 1994.

Andermann E, Andermann F, Silver K, Arnold D, Levin S. **Benign Familial Nocturnal Alternating Hemiplegia of Childhood: A migraine related disorder?** Meeting of the American Academy of Neurology, Washington DC May 1994.

Otero L, Brown R, Brown G, Matthews P, Silver K, Arnold D. **Association of Cerebral Dysgenesis and Lactic Acidemia with X-linked Pyruvate Dehydrogenase E1 α Subunit Mutation in Females**. Meeting of the American Academy of Neurology, Washington DC May 1994.

Cendes F, Andermann F, Silver K, Arnold D. **Imaging of Neuronal Damage in Chronic Encephalitis and Epilepsy: Rasmussens Syndrome**. Meeting of the American Academy of Neurology, Washington DC May 1994.

Dorsal Rhizotomy Surgery for Spasticity School of Physical, Occupational Therapy, McGill March 1994, 1995.

Silver K. **Teratogenesis of Anticonvulsant Medications**; Rehabilitation Research Seminars. Montreal Children's Hospital, June 1994.

Silver K. **Benign Juvenile Focal Amyotrophy Clinical Update: Neuromuscular Disease**. Montreal Neurological Institute, September 1994.

Fett K, Andermann F, Kuzniecki R, Dubeau F, Barkovitch J, Silver K, Villemure JG, Guerrini R. **Bilateral Parieto-occipital Polymicrogyria presenting with Intractable Epilepsy: Another developmental disorder**. Meeting of the American Epilepsy Society. New Orleans, December 1994.

Neurogenetics of Pediatric Neuromuscular Disorders. Pediatric Resident Seminars McGill, March 1995.

Silver K, Leonard G, Petit S, Daignault S, Schopflocher C, Lopes-

KENNETH SILVER

Cendez I, Andermann E. **Cognitive and Motor Effects of Anticonvulsant Drug Therapy During Pregnancy on School-Age Offspring.** Meeting of the American Academy of Neurology, Seattle, Washington May 1995.

Medication antiepileptique chez la femme enceinte: Effects cognitifs chez l'enfant. Hôpital de la Salpêtrière. Paris France November 1995.

Andermann E, Leonard G, Petito S, Daignault S, Schopflocher C, Lopes-Cendez I, Silver K. **Cognitive and Motor Effects of Anticonvulsant Drug Therapy During Pregnancy on School-Age Offspring.** Annual meeting of the American Epilepsy Society Baltimore December 1995.

Wein T, Andermann F, Silver K, Andermann E, Dubeau F. **Exquisite Sensitivity of Paroxysmal Kinesigenic Choreoathetosis to Carbamazepine.** Annual Meeting of the American Epilepsy Society Baltimore December 1995.

Pupillo CT, Andermann F, Dubeau F, Tamperi D, Silver K, Fett K, Guerrini R, Dulac O, Lombroso C. **Bilateral Sylvian Parietal-Occipital Polymicrogyria.** Meeting of the American Academy of Neurology, San Francisco March 1996.

Silver K, Andermann F. **Familial Alternating Epilepsia Partialis Continua with Chronic Encephalitis: A Variant of Rasmussen's Syndrome?** World Federation of Neurology Neurogenetics Research Group Meeting, San Francisco March 1996.

Leonard G, Petito A, Seni MH, Vinette M, Schopflocher C, Daignault S, Lopes-Cendes I, Silver K, Andermann E. **Cognitive and Motor Effects of Anticonvulsant Drug Therapy During Pregnancy on School-Age Offspring.** Meeting of the American Academy of Neurology, San Francisco March 1996.

Invited Speaker, **Alternating Hemiplegia of Childhood.** Neurology Grand Rounds, Loyola University of Chicago, June 1996.

Miller S, Shevell M, Silver K. **The Diagnostic Utility of the Nerve-Muscle-Skin-Biopsy in Pediatric Neurology Practice.** Meeting of the Child Neurology Society, Minneapolis September 1996.

Poulin C, Matthews P, Genge A, Eydoux P, Shevell M, Vanasse M,

KENNETH SILVER

Silver K. **Childhood Hereditary Neuropathy With Liability Pressure Palsy.** Meeting of the Child Neurology Society, Minneapolis September 1996.

Use of Botulinum Toxin for the Treatment of Spastic Cerebral Palsy. The Health Show; Newsworld Television Network, November 6, 1996.

Use of Botulinum Toxin for the Treatment of Spastic Cerebral Palsy. Newswatch; CBC Television, December 5, 1996.

Arbour L, Silver K, Coulter-Mackie M, Hechtman P, Leonard G, Treacy E. **Two Novel Mutations of the Arylsulfatase A Gene in a Vietnamese Family with Metachromatic Leukodystrophy (R143G & W318ter) with Intrafamilial Phenotype Variability.** 7th International Congress of Inborn Errors of Metabolism, Vienna, May 1997.

Silver K, De Stefano N, Andermann F, Arnold D. **Magnetic Resonance Spectroscopy Studies in Patients with Alternating Hemiplegia of Childhood.** International Alternating Hemiplegia Workshop, Seattle May 1997.

Silver K, Ohtsuka Y, Lopes-Cendez I, Andermann E. **Neurological and Developmental Abnormalities in the Offspring of Epileptic Mothers.** International Epilepsy Congress, Dublin, July 1997.

Leonard G, Silver K, Andermann E, Ptito A, Schopflocher C. **Cognitive Effects of Antiepileptic Drug Therapy During Pregnancy on School-age Offspring.** International Epilepsy Congress, Dublin, July 1997.

Levav M, Mirsky AF, Herault J, Xiong L, Silver K, Andermann E. **Familial Characteristics of Cognitive Impairment in Epilepsy.** International Epilepsy Congress, Dublin, July 1997.

Leonard G, Ptito A, Silver K, Daigneault S, Andermann E, Schopflocher C. **The Long-Term Effects of Antiepileptic Drugs on Cognition.** Fifth European Congress of Psychology, Dublin, July 1997.

Silver K. **Pregnancy, Epilepsy and Development of Offspring.** LUMC, Neurology Grand Rounds, October 1997.

Silver K. **Alternating Hemiplegia of Childhood.** LUMC Pediatric Grand Rounds, October 1997.

KENNETH SILVER

Miller S, Shevell M, Rosenblatt B, Silver K, O'Gorman A M, Andermann F. **Bilateral Perisylvian Polymicrogyria Presenting as Congenital Hemiplegia: A Report of Three Cases.** 26th Annual Meeting of the Child Neurology Society, Phoenix, October 1997.

Silver K. **Treatment of Childhood Spasticity.** LUMC, Neurosurgery Grand Rounds, February 1998

Silver K, Keen M. **To Deafferent or Denervate, that is the Question. Novel Treatments of Spastic Cerebral Palsy.** LUMC Pediatric Grand Rounds, February 1998.

Silver K. **ADHD.** School Nurse Institute Day, Naperville District #203, February 1998.

Silver K. **Alternating Hemiplegia.** The Rehabilitation Institute of Chicago, Northwestern University Medical School Department of Rehabilitation Medicine, Chicago, IL, March 1998.

Silver K. **Treatment of Seizures in Children.** Continuing Medical Education, LUMC, Recent Update on Diagnosis and Therapies for Seizure Disorders, March 1998.

Silver K, Mills E L, and the Members of IMPACT. **Infantile Spasms: An Active Surveillance Multicenter Study.** Meeting of the American Academy of Neurology, Minneapolis, MN, April 1998.

Mills E L, Silver K, and the Members of IMPACT. **Acute Flaccid Paralysis in Children: An Active Surveillance Multicentre Study.** Meeting of the American Academy of Neurology, Minneapolis, MN, April 1998.

Guerreiro M, Andermann E, Guerrini R, Dobyns W, Silver K, et al. **Familial Perisylvian Polymicrogyria.** Meeting of the American Academy of Neurology, Minneapolis, MN, April 1998.

Mills E L, Silver K, and the Members of IMPACT. **Acute Flaccid Paralysis in Children: Active Surveillance for Poliomyelitis.** Meeting of the American Pediatric Society and the Society for Pediatric Research, New Orleans, May 1998. *Selected for Press release as most newsworthy.*

KENNETH SILVER

Mills E L, Silver K, and the Members of IMPACT. **Acute Encephalitis/Encephalopathy in Children: A Multicenter Study.** Meeting of the Canadian Pediatric Society, Hamilton, Canada, June 1998. *Selected for Session: This year's Best CPS Papers*

Silver K. **Movement Disorders in Children.** Loyola University Medical Center (LUMC), Neurology Grand Rounds, July 1998.

Akhter A, Tseng A, Silver K, Goldberg K, Agrawal R. **Pediatric Tacrolimus Induced Neurotoxicity.** Meeting of the Child Neurology Society, Montreal, Canada, October 1998.

Silver K. **Neuronal Migration Disorders,** LUMC Neurology Grand Rounds, January 1999.

Silver K. **Tourette Syndrome,** Naperville School District, Jan. 1999.

Silver K, Zifkin B. **Neonatal Touch-Induced Reflex Seizures,** Meeting of American Academy of Neurology, Toronto, Canada, April 1999.

Silver K, **The Teratogenic and Developmental Risks of Antiepileptic Medications,** LUMC Pediatric Grand Rounds, June 1999.

Silver K. **Alternating Hemiplegia of Childhood; Clinical, Therapeutic and Research Findings.** Invited Speaker First Annual MidWestern Alternating Hemiplegia of Childhood Meeting, Rockford, IL, June 1999.

Silver K. **Novel Treatment of Childhood Spasticity.** LUMC Neurology Grand Rounds, July 1999.

Silver K. **Tourette Syndrome.** CLTV Chicago TV News, July 1999.

Silver K. **Alternating Hemiplegia of Childhood.** Journal Times, Racine, WI, August 1999

Silver K, Suwan N, Rita D, Walsh C. **Familial Bilateral Periventricular Nodular Heterotopia In A Boy.** 28th Annual Meeting of the Child Neurology Society, Nashville, TN, October 1999.

Suwan N, Silver K, Horwitz S. **A New Reversible Leukoencephalopathy With Bilateral anterior Temporal Lobe Cysts.** 28th Annual Meeting

KENNETH SILVER

of the Child Neurology Society, Nashville, TN, October 1999.

Silver K, **How to Treat Childhood Seizures While Waiting for the Neurologist.** Western Chicago Pediatrics Group. February 2000.

Silver K, **Neuromuscular Disorder of Childhood** LUMC Neurology Grand Rounds November 1999.

Silver K, Chawla J, **Childhood Intractable Epilepsy Treated with Vagal Nerve Stimulation,** LUMC Neurology Grand Rounds, March 2000.

Russman, B, Silver K, **Is Spasticity Controlling You or a Loved One?** DuPage Easter Seals, March 2000.

Silver K, DeStefani T, **Talk the Talk About Walking the Walk,** Child Health Update LUMC April 2000.

Silver, K, Tumashova, L. **Neurovascular Disorders in Childhood,** LUMC Neurology Grand Rounds, May 2000.

Silver, K, **Update on Alternating Hemiplegia of Childhood,** 2nd Annual Midwest Meeting, Rockford, Illinois, June 2000.

Silver, K. C. Nagar, **Ataxia in Children,** LUMC Neurology Grand Rounds, August 2000.

Silver, K. **Childhood Eplipsy,** West Suburban Hospital, Oak Park, Illinois, October 2000

Silver, K. **Alternating Hemiplegia of Childhood,** University of Utah, Salt Lake City, Utah, November 2000

Silver K. Mills E, **Multicenter Canadian Surviellance Study on Infantile Spasms and its relation to Immunization (withdrawn)** Tokyo, Japan February 2001

Silver K. **Sit Still, Pay Attention and Stop Moving Around so Much.** Naperville School District Lisle, IL March 2001

Silver K. **Treatment of Spasticity**
2nd Annual Pediatric Neuroscience Day
University of Chicago Children's Hospital

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Oakbrook, IL April 2001

Silver K. Horowitz, S., Suwan, N. A new reversible Leukoencephalopathy with Anterior Temporal Lobe Cysts. XVII World Congress of Neurology London England June 2001

Silver K. Attention Deficit Disorder
Little Company of Mary Hospital
University of Chicago Children's Hospital
Pediatric Conference
Evergreen Park, IL September, 2001

Silver K. Sit Still, Pay Attention and Stop Moving Around So Much.
St. Elizabeth Hospital, CME Chicago, IL October, 2001

Silver K. Spasticity in Children
Grand Rounds
Shriners Hospital
Chicago, IL January 2002

Silver K. Childhood Epilepsy
St. Elizabeth Hospital CME
Chicago, IL February 2002

Silver K. Penn R, Huttenlocher P. Pallidotomy is an Effective Treatment for Malignant Movement Disorder in Neuronal Ceroid Lipofuscinosis VII Congress of the European Pediatric Neurology Society Paris, France December 2002

Silver K. Alternating Hemiplegia of Childhood; Pathophysiology and Treatment Strategies. International Workshop on Alternating Hemiplegia of Childhood VII Congress of the European Pediatric Neurology Society Paris, France December 2002

Aicardi J, **Silver K. Treatment Trials; Commentary.** International Workshop on Alternating Hemiplegia of Childhood VII Congress of the European Pediatric Neurology Society Paris, France December 2002

Silver K. Seizure Disorders in Children
Medical Staff CME Program
St. Elizabeth Hospital
Chicago, IL January 2003

Silver K. Alternating Hemiplegia of Childhood
Neurology Grand Rounds
University of Illinois

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Chicago, IL February 2003

Silver K. Penn R, Huttenlocher P. **Pallidotomy and Other Therapies for Intractable Movement Disorder in Neuronal Ceroid Lipofuscinosis** 9th International Congress on Neuronal Ceroid Lipofuscinosis Chicago, IL April 2003

Silver K. **Headaches in Children**, Chicago Neurological Society and Chicago Medical Society Chicago, IL April 2003

Silver K. **Migraines in Children**
Pediatric Neurology Update Day
University of Chicago Children's Hospital
Oak Brook, IL October 2003

Silver K. **Post Traumatic Epilepsy in Children**
Schwab Rehabilitation Center
Chicago, IL October 2003

Silver K. **Headaches in Children**
Chicago Medical Society
Midwest Clinical Conference
Chicago, IL March 2004

Silver K. **Botulinum Toxin use for Pediatric Movement Disorders and Headaches** Midwest Meeting of the Minds Chicago, IL June 2004

Silver K. American Academy of Pediatrics Society for Developmental and Behavioural Pediatrics: An Intensive Review
Chicago, IL August 2004

- 1) Childhood Epilepsy Syndromes
- 2) Head Injury
- 3) Hydrocephalus
- 4) Brain Tumors
- 5) Brain Maldevelopment
- 6) Tics and Tourette Syndrome
- 7) Pediatric Stroke

Silver K. Invited speaker; International Workshop on Paroxysmal Disorders In Infancy, Islay, Scotland - May 2005

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1. Infantile Choreaethetosis
2. Paroxysmal Kinesigenic Dystonic Choreaethetosis
3. Periodic Alternating Torticollis
4. Alternating Hemiplegic of Childhood
and Session Chairman
5. Congenital Periodic Alternating Nystagmus
6. Infantile Narcolepsy

Silver K. Alternating Hemiplegia of Childhood: Recent Advances:
Co-organizer of Symposium, Boston MA July 2005

Lewandowski ER, Leonard G, Ptito A, Silver K, Andermann E. **Effect of In-Utero Exposure to Antiepileptic Medication on the Cognitive Abilities of School Age Children.** *Selected for the Pediatric Epilepsy Highlights Session.* Annual Meeting of the American Epilepsy Society and the American Clinical Neurophysiology Society. Washington D.C. Dec 2005`

Silver K. **Pediatric Strokes** - Schwab Rehabilitation Hospital
Chicago, IL June 2006

Silver K. **Alternating Hemiplegia of Childhood; Current Concepts**
Faculty Research Seminar- Department of Pediatrics,
University of Chicago. June 2006

Silver K 10th International Child Neurology Congress, Co-Chair
Session on Neuro-Rehabilitation. Montreal Canada June 2006

Silver K International Symposium on Alternating Hemiplegia.
Montreal Canada. Montreal Canada June 2006

1. Co-organizer of Symposium
2. Co-chair, Session on Treatment of Alternating Hemiplegia
3. Co-chair, Session; Discussion and Think Tank
4. Overview of Treatment Modalities

Silver K. **Evaluation of Neuromuscular Disorders in Children.**
Shriners Hospital for Children, Oak Park, IL. Aug. 2006

Silver K. **Movement Disorders in Children.** Schwab Rehabilitation
Hospital, Chicago, IL Oct 2006

October 2006

KENNETH SILVER



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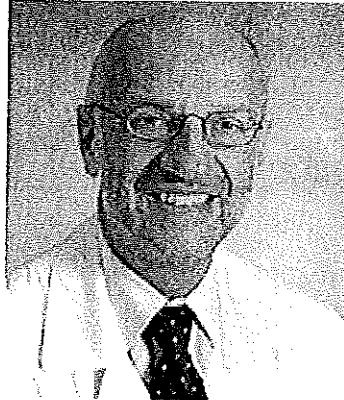
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Kenneth Silver, MD

Associate Professor of Pediatrics

A pediatric neurologist, Dr. Kenneth Silver specializes in neuromuscular disorders, cerebral palsy, neurogenetic disorders, movement disorders, headaches, seizures, and attention deficit disorder.

Dr. Silver is also an active researcher. Recent research includes investigations on alternating hemiplegia of childhood.



Practice Locations

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5721 S. Maryland Avenue
Chicago, IL 60637

Center for Advanced Medicine
5758 S. Maryland Avenue
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Year Started Practice

1979

Board Certification

Neurology, with a special competency in pediatric neurology

Medical School

University of Saskatchewan, Canada

Residency and Fellowship

Children's Health Science Center, Winnipeg, Canada
Montreal Children's Hospital
Montreal Neurological Institute

Memberships

Alternating Hemiplegia of Childhood Foundation
American Academy of Neurology
American Headache Society

Languages Spoken

Clinical Interests

- Pediatric neurology
- Spasticity
- Headache
- Neuromuscular disorders
- Alternating hemiplegia of childhood

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Selected Publications

Silver K, Andermann F. Alternating hemiplegia in childhood: A study of 10 patients and results of flunarizine treatment. *Neurology* 43(1): 36-41, Jan 1993.

Mittal S, Farmer JP, Silver K. Reliability of intraoperative electrophysiological monitoring in selective posterior rhizotomy. *J Neurosurg* 95(1): 67-75, July 2001.

Arbour LT, Silver K, Hechtman P, Treacy EP, Coulter-Mackie MB. Variable onset of metachromatic leukodystrophy in a Vietnamese family. *Pediatr Neurol* 23(2): 173-6, Aug 2000.

Geurreiro MM, Andermann E, Geurrini R, Dobyns WB, Kuzniecky R, Silver K, et al. Familial perisylvian polymicrogyria: A new familial syndrome of cortical maldevelopment. *Ann of Neurol* 48(1): 39-48, July 2000.

Collins KA, Eydoux P, Duncan AM, Ortenberg J, Silver K, Der Kaloustian VM: Phenotypic manifestation in a child with 46,Xder(X)t(X;1)(q24;q31.1). *Am J Med Genet* 91(5): 345-7, Apr 24, 2000.

Miller S, Shevell M, Silver K, Kramer M. The diagnostic yield of the

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nerve-muscle skin biopsy in paediatric neurology practice. The Montreal Children's Hospital Neuromuscular Group. *Pediatr Rehabil* 2(2): 95-100, Apr-June 1998.

Graham GE, Silver K, Arlet V, Der Kaloustian VM. King syndrome: Further clinical variability and review of the literature. *Am J Med Genet* 78(3): 254-9, July 7, 1998.

Miller SP, Shevell M, Rosenblatt B, Silver K, O'Gorman A, Andermann F: Congenital bilateral perisylvian polymicrogyria presenting as congenital hemiplegia. *Neurology* 50(6): 1866-9, June 1998.

Silver K, Andermann F, Meagher-Villemure K. Familial alternating epilepsy partialis continua with chronic encephalitis: Another variant of Rasmussen syndrome? *Arch Neurol* 55(5): 733-6, May 1998.

Wein T, Andermann F, Silver K, Dubeau F, Andermann E, Rourke-Frew F, Keene D. Exquisite sensitivity of paroxysmal kinesigenic choreoathetosis to carbamazepine. *Neurology* 47(4): 1104-6, Oct 1996.

Otero LJ, Brown GK, Silver K, Arnold DL, Matthews PM. Associations of cerebral dysgenesis and lactic acidemia with X-linked PDH E1 alpha subunit mutations in females. *Pediatr Neurol* 13(4): 327-32, Nov 1995.

Cendes F, Andermann F, Silver K, Arnold DL. Imaging of axonal damage in vivo in Rasmussen's syndrome. *Brain* 118(Pt 3): 753-8, June 1995.

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The University of Chicago Comer Children's Hospital | 5721 S. Maryland Avenue | Chicago, IL 60637



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Newark, NJ 07102-1811
August 14, 2007

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Lincoln, NE 68501-7140

RE: MARLER, SEOAN
University of Chicago EB-2 Petition

To Whom It May Concern:

This letter is to support the University of Chicago application on behalf of Seoan Marler. Ms. Marler possesses exceptional ability in the area of science and will continue to be an invaluable contributor to the research done at the University of Chicago.

I am an assistant professor of Biology at the New Jersey Institute of Technology where I teach and train students while conducting my own research projects as a Principal Investigator. In the past, I have worked in the Anatomy department at the University of Chicago as a postdoctoral fellow where I focused mainly on the response of a network of neurons in the brainstem that generates respiratory activity to changes in oxygen tension. In addition to peripheral mechanisms for detecting changes in oxygen (e.g., in the carotid bodies) there are also central mechanisms that govern a change in the output of this respiratory network from eupnea (normal breathing) to gasping. I have been studying these mechanisms at both the network and cellular level. Our hope is to better understand these mechanisms in order to cure diseases such as Sudden Infant Death Syndrome and Rett syndrome.

I have known Seoan Marler for two years as she was collaborating with members of our team. She is enthusiastic, hard-working, and creative. She has all the attributes of a person who will one day become a successful researcher and/or doctor. She graduated from the University of Chicago in 2004 with a degree in biology and a specialization in Neurosciences. She has worked with Pediatric Epilepsy Center since 2001 on a project whose goal is to better understand and treat epilepsy in children. In the relatively short time I have known her, she has developed tremendously professionally. Rather than being content to simply following instructions, she has from the very beginning been very involved in developing and carrying out research projects.

The first of her projects that I am familiar with involved culturing neurons from the mammalian cerebral cortex and recording intracellularly from them using the visual patch-clamp technique. The aim of this project was to test the idea that homeostatic mechanisms that govern the intrinsic excitability of neurons as well as the strengths of the interconnections within a network may play a role in epileptiform activity. The bath application of tetrodotoxin, a neurotoxin, leads to the complete cessation of activity. In response to this deprivation of activity, after a period of several days changes occurred within the network that caused an increase in its level of excitability. Homeostatic mechanisms of this sort may help to regulate the level of activity in the healthy cerebral cortex. Conversely, a breakdown in homeostatic mechanisms may contribute to maladies such as epilepsy. Ms. Marler has expanded on the original idea of this project to include inhibiting the enzyme COX-2 which is upregulated in the inflammation pathway in the central nervous system after trauma. By inhibiting COX-2 activity, she has been able to arrest the process of epileptogenesis in the neocortical organotypic cultures. She has also been able to successfully culture human brain tissue from epilepsy surgeries conducted by the pediatric neurosurgeon, Dr. David Frim and is exploring ways to further hinder epileptogenesis in these in-vitro slices.

As high percentage of brain cancer or tumor patients present symptoms of epilepsy, Ms. Marler has also started her investigation in glioma proliferation and its relation to epileptogenesis. The goal of this project is to develop a gene therapy using small interfering RNAs to inhibit translation of proteins upregulated in the proliferation of cancer cells and thereby hopefully inhibiting epileptogenesis as well. Utilizing both engineered cell lines and organotypic slices cultured from patient tissues, she is exploring main targets responsible for the cancer growth. Future directions include developing an in-vivo mouse model with cancer tissue implantation and effectively delivering the gene therapy before clinical trial is possible.

In addition to the cell culture techniques and electrophysiological techniques mentioned above, Ms. Marler has also learned how to do analysis of data with the software program, Matlab, and has begun to learn immunohistological techniques. She will present her latest findings this fall at the annual meeting of the Society for a Neuroscience. I eagerly anticipate her first scientific papers, which will no doubt be forthcoming.

Ms. Marler's work has been innovative, productive and addresses important questions at the juncture between basic science and clinic studies. I have no doubt that her contribution to neuroscience will be crucial in the future. I fully support the University of Chicago's petition for Seoan Marler based on exceptional ability in the sciences. If you have any questions, please do not hesitate to contact me at any time in the future.

Sincerely,



Andrew Hill, Ph. D.
Assistant Professor
773 600 0754

Curriculum vitae

Andrew Hill

Department of Biological Sciences
New Jersey Institute of Technology
626 Cullimore Hall, University Heights
Newark, NJ 07102-1811

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Email: aavhill@yahoo.com

Birth date and Birthplace

Birth: June 22, 1966; Hanover, NH

Education

1989 B.S. Zoology; University of Rhode Island, RI

1996 Ph.D. Neuroscience and Behavior Program; University of Massachusetts, MA
(Ph.D. advisor: Rodney K. Murphey)

Postdoctoral Research Experience

1996-2001 Postdoctoral Fellow, Department of Biology, Emory, Atlanta, GA
(Advisor: Ronald L. Calabrese)

2001-2004 Postdoctoral Fellow, Laboratoire de Neurobiologie des Réseaux, Univ.
Bordeaux 1 (Advisor: Pierre Meyrand)

2004-present, Research Associate (assistant professor) Department of Organismal Biology and
Anatomy, Univ. of Chicago (Advisor: Jan M. Ramirez)

Teaching Experience

1994-1995 Teaching assistant in Neurophysiology (a laboratory based course for undergraduate
and graduate students), University of Massachusetts, Amherst, MA.

1997-2000 Teaching assistant in Neural Systems and Behavior (summer course for graduate
students), Marine Biological Laboratory, MA

2001 Director and teacher for first cycle of European Nerve Net School (summer course for
graduate students), Univ. Bordeaux 1

2006 Teaching assistant in Neural Systems and Behavior (summer course for graduate
students), Marine Biological Laboratory, MA

Additional Training

Methods in Computational Neuroscience, summer 1993, Marine Biological Laboratory, MA

European Union Advanced Course in Computational Neuroscience, summer 1999, Trieste, Italy

Awards

National Research Service Award (postdoctoral fellowship), 1996-1999
Chateaubriand Postdoctoral Fellowship March 2001-2002
French Ministry of Research Postdoctoral Grant for Foreigners 2002-2004

PUBLICATIONS

Refereed papers

Hill AA, Edwards DH, Murphey RK The effect of neuronal growth on synaptic integration. J Comput Neurosci. 1994 1(3) :239-54

Olsen O, Nadim F, Hill AA, Edwards DH. Uniform growth and neuronal integration. J Neurophysiol. 1996 76(3): 1850-7

Hill AA, Jin P. Regulation of synaptic depression rates in the cricket cercal sensory system. J Neurophysiol. 1998 79(3):1277-85

Hill AA, Lu J, Masino MA, Olsen OH, Calabrese RL. A model of a segmental oscillator in the leech heartbeat neuronal network. J Comput Neurosci. 2001 10(3) :281-302

Hill AA, Masino MA, Calabrese RL. Model of intersegmental coordination in the leech heartbeat neuronal network. J Neurophysiol. 2002 87(3):1586-602

Wenning A, Hill AA, Calabrese RL. Heartbeat Control in Leeches: II. Fictive Motor Pattern. J Neurophysiol. 2004 Jan;91(1):397-409.

Jezzini SH, Hill AA, Kuzyk P, Calabrese RL. A detailed model of intersegmental coordination in the timing network of the leech heartbeat central pattern generator. J Neurophysiol. 2004 Feb; 91(2):958-77.

Papers in preparation

Hill AA, Ramirez JM. Induction of pacemaker activity by hypoxia.

Hill AA, Massabuau JC, Simmers J, Meyrand P. Oxygen sensing by pacemaker neurons of a rhythmic motor network.

Papers submitted

Hill AA, Cattaert D. A heterogeneous population of motor neurons innervates a single crayfish walking leg muscle.

Book chapters and review articles

Hill AA, Masino MA, Calabrese RL. Intersegmental coordination of rhythmic motor patterns. J Neurophysiol. 2003 Aug; 90(2):531-8.

Hill AA, Vanhooser SD, Calabrese RL (2002) Half-Center Oscillators Underlying Rhythmic Movements. In: The Handbook of Brain Theory and Neural Networks. MA Arbib, ed., MIT Press, Cambridge, MA.

Calabrese RL, Vanhooser SD, Hill AA (2001) Realistic Modeling of Small Neuronal Circuits. In: Computational Neuroscience: Realistic Modeling for Experimentalists. E De Schutter, ed., CRC Press., pp. 259-288.

Abstracts

Ramirez JM, Hill AAV, Viemari J (2006) The reconfiguration of the respiratory network during normoxia and hypoxia. First International Congress on Respiratory Biology, Bonn, Germany

Hill AAV, Ramirez JM (2006) Graded hypoxia leads to a graded change from fictive eupnea to gasping in the ventral respiratory group in the mouse brainstem. Society for Neuroscience

Hill AAV, Ramirez JM (2006) A class of neurons in the pre-Bötzinger complex become bursting pacemakers when exposed to severe hypoxia. Origin and Regulation of Bursting Activity in Neurons. Georgia State University, Atlanta

Hill AAV, Cattaert D (2004) Classification of motor neurons that control the walking leg of the crayfish. Society for Neuroscience

Meyrand P, Hill AAV, Cattaert D (2004) Identification of motor neurons that control the 5th walking leg of the crayfish. Federation of European Neuroscience.

Hill AAV, Massabau JC, Simmers J, Meyrand P (2002) Modulation of a single motor network neuron by physiological levels of oxygen. Society for Neuroscience 367.17

Jezzini SH, Hill AAV, Calabrese RL (2000) Dynamic activity of a coordinating fiber with two initiation sites. Society for Neuroscience 164.1

Wenning A, Hill AAV, Calabrese RL (2000) Regulation of blood pressure in the leech: Interaction of peripheral neuromodulation and motor pattern. Society for Neuroscience 164.4

Invited talks

2005, January, Computational Neuroscience program, University of Chicago

2006, June 1st, Dept. of Neuroscience, Cell Biology and Physiology, Wright State University

2006, June 19th, Neural Systems and Behavior course, Marine Biological laboratory

2006, June 25th, University of Rhode Island

2007, February 7th, New Jersey Institute of Technology



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Professor and Chairman

Debra J. Cato
Administrator

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Reference letter for Seoan Marler
The University of Chicago EB-2 Petition

August 15, 2007

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To Whom It May Concern:

This letter strongly supports the University of Chicago application on behalf of Seoan Marler, an employee who possesses exceptional ability in the area of science. This letter will describe my professional view of her talent, current work and outstanding research she has done and currently is involved in.

I am an Assistant Professor of the Neurology Department at the Medical College of Wisconsin. I am specialized in electrophysiology, specifically the patch-clamp technique of voltage and current clamp. I received my Doctor of Philosophy from the University of Chicago in August of 2000 and afterwards conducted electrophysiological experiments for five years in different labs on several subjects.

My current research is focused to uncover the underlying neuronal mechanisms that cause epilepsy in children. My research – and Ms. Marler's as well – seeks to uncover the cellular cause of epilepsy and thereby develop more effective treatments.

I worked with Ms. Marler at the University of Chicago while I conducted electrophysiological research at the Pediatric Department. From the beginning I was impressed by her eagerness to learn and by her ability to pick up and understand the quite challenging practical and theoretical tasks of the patch clamp technique. She has shown outstanding determination and interest to learn the required skills to conduct patch clamp experiments and she has managed to perform unsupervised experiments on her own in a very short



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Department of Neurology

period of time. Using these skills, Ms. Marler is involved in a variety of projects at the University of Chicago today.

Ms. Marler earned her Bachelor Degree in Biological Science (Neuroscience) and also has a Bachelors of Art in Economics from the University of Chicago. In 2001 she worked as an EEG technician and research assistant in the Pediatric Epilepsy Center, where she contributed in clinical work that was and still is crucial in epilepsy research. Part of the research in which Ms. Marler was involved used nonlinear systems tools that provide a mathematical model, which improved the treatment of epilepsy patients.

A project more specifically involving Ms. Marler focuses on electrophysiological experiments with human brain tissue from the resective epilepsy surgeries. Ms. Marler's work and that of her colleagues may allow developing novel treatments for epilepsy based on electrophysiological findings from patch clamp experiments on human neurons in brain slices from resection surgeries.

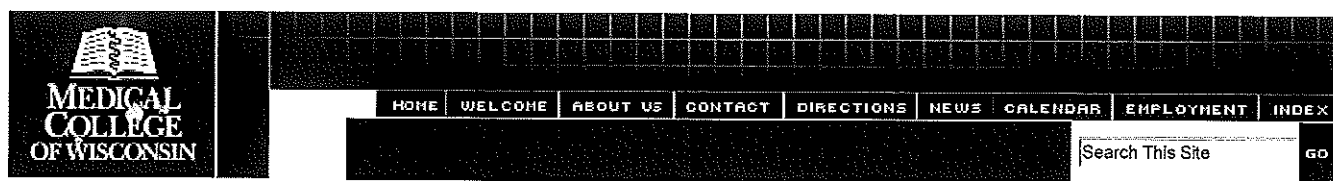
In a project of her own, Ms. Marler currently develops a seizure model using organotypic culture slices from the mouse neocortical slices. When cultured, these slices of mouse neocortex become excitable and can be a model to study epileptogenesis. Useable animal models of epileptogenesis are very rare and they are in great demand, because they allow gathering information from intensive research that could be used in clinical treatments. By developing these slice models, Ms. Marler will be able to look for intervention strategies to arrest or impede epileptogenesis in humans!

I have no doubt that Ms. Marler plays an important role in various research projects that are ongoing in the Pediatric Epilepsy Center. Her projects have been creative and the techniques that she employed are examples of her special skills and talents. She is certainly an integral part of the research team that has been built here at the hospital and the University. These many talents as well as her enthusiastic and energetic work habits predict that her contribution to neuroscience research and epilepsy research in particular over the coming years will be of very high impact.

I strongly support the notion that she will be allowed to continue her work here in the United States as an outstanding scientist! I am certain that she will contribute greatly in future projects with her outstanding skills and knowledge and thereby improve future treatment options for epilepsy patients.

Sincerely,

Frank P. Elsen, Ph.D.

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Division of Pediatric Neurology***Contact Information:**

phone: (414) 266-3996

email: felsen@mcw.edu**Specialty:** Pediatric Neurology**Sub Specialty:**

Electrophysiology

Patch-clamp technique

Voltage- and Current Clamp

Education:

Study of Biology at the University of Kaiserslautern / Germany, 1989 - 1995

Diplom (master degree) in Biology, University of Kaiserslautern / Germany, 1995

Predoctoral Fellow, Department of Physiology, Medical School, University of Göttingen / Germany, 1995 - 1996

Graduate Student, Department of Organismal Biology and Anatomy, University of Chicago / USA, 1996 - 2000

Graduation, Doctor of Philosophy, Department of Organismal Biology and Anatomy at The University of Chicago (Thesis: Characterization of voltage-activated calcium currents in the pre-Bötzinger complex of mice and their modulation by hypoxia), August 2000

Postgraduate Training and Fellowship Appointments:Research associate in the Department of Anesthesiology at the Weill Medical College in Manhattan, New York City (Thematic: Anesthetic interactions at the GABA_A receptor), 2000 - 2003.

Research associate in the Department of Pediatrics at The University of Chicago, (Thematic: Epilepsy related electro-physiological research, Development of hypoxia-induced brain slice model), 2003 - 2005

**Brief Clinical/Research Interest Statment**

Our main research interest is to uncover the underlying neuronal mechanisms that cause epilepsy in children. Today about 1% of the world's population (~ 65 million) suffers from epilepsy and 30% of all epilepsy patients (~ 19.5 million) cannot be treated with anticonvulsants. As of today the mechanisms remain unclear that cause the on- or offset of seizure activity in the neuronal networks of a patient's brain. Together with **Dr. Charles Marcuccilli** we hope to uncover the cellular cause of epilepsy and thereby help to develop more sophisticated and effective treatments. We use the whole-cell patch clamp technique to record cellular currents from cortical neurons in human brain slices

that have been obtained during resection surgery.

Selected Publications

van Drongelen W., Lee H.C., Hereld M., Chen Z., Elsen F.P., & Stevens R.L. (2005). Emergent epileptiform activity in neural networks with weak excitatory synapses. *IEEE Trans Neural Syst Rehabil Eng.*, 13, 236-41.

Elsen F.P., & Ramirez J.M. (2005). Postnatal development differentially affects voltage-activated calcium currents in respiratory rhythmic versus nonrhythmic neurons of the pre-Botzinger complex. *J Neurophysiol* 94, 1423-31.

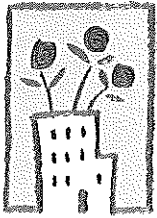
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August 8, 2007

U.S. CIS
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850 'S' Street
PO BOX 87140
Lincoln, NE 68501-7140

Re: University of Chicago's EB-2 Petition on behalf of
Seoan Marler

Dear Sir or Madam,

I write in support of the University of Chicago's petition on behalf of Seoan Marler, whom I believe possesses exceptional ability in the sciences.

I am a currently Assistant Professor, Researcher, and Technical Director of the Epilepsy Center at the University of Chicago. My expertise is in modeling, signal processing and electrophysiology, and I apply those disciplines to childhood epilepsy at the University of Chicago Comer Children's Hospital Department of Pediatrics. My research focuses on: (1) Underlying neuronal mechanisms in epilepsy (synchrony, recruitment, oscillation, weak coupling), (2) Relationships between neuronal activity at different scales (neuron, network, brain), (3) Detection and prediction of brain electrical activity during seizures using various signal processing techniques (correlation dimension, Kolmogorov entropy, wavelet analysis), (4) Localization of sources from surface recordings (dipole analysis MUSIC, LORETA, spatial filtering), and (5) Monitoring of the nervous system in the intensive care environment (EEG, evoked potential). Specific research projects through the Center for Integrative Neuroscience & Neuroengineering Research include, large scale modeling of neocortical networks, wavelet analysis and seizure detection in pediatric records, and electrical stimulation and seizure activity in neocortex. Large scale modeling is done in collaboration with the Division of Computers Science and Mathematics at Argonne National Laboratory.

Ms. Marler's research is of particular interest to me because it concerns the very subjects that I also research, and most importantly, impact future therapies for children stricken with childhood epilepsy. Ms Marler has shown exceptional skill and enthusiasm in the development of tissue cultures to study the process of epileptogenesis. In these cultures she determined the effects of different compounds on the development of properties that are critically associated with epileptiform activity. This novel approach in which she plays such a critical role has the potential to alter the therapeutic approach in epilepsy, a serious neurological disease that affects about 1% of the population.

I sincerely hope your office recognizes the import and impact Ms. Marler's research has on the subject at hand, and find that her abilities are exceptional.

Sincerely,

A handwritten signature in cursive script that reads "Wim van Drongelen". The signature is written in dark ink and is positioned below the word "Sincerely,".

Dr. Wim van Drongelen, Ph.D.
Departments of Pediatrics, Neurology
The Computation Institute
The University of Chicago Children's Hospital

CURRICULUM VITAE

Wim van Drongelen, Ph. D

Assistant Professor,
Technical Director Pediatric epilepsy Center,
Coordinator of Research Pediatric Epilepsy Program,
Senior Fellow Computational Institute
The University of Chicago Biological Science Division,

Address Office:

Department of Pediatrics,
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Tel: 708 799 0697
E-mail: wimvan@ameritech.net

Date of Birth:

January 30 1953

Citizenship:

The Netherlands, Permanent Resident USA

Marital Status:

Married: Spouse Ingrid van Dijk

Education and Postgraduate Training:

1970-1974	Kandidaats	University Leiden, Leiden, the Netherlands, Biophysics
1974-1977	Doctoraal,	University Leiden, Leiden, the Netherlands, Physiology, Anatomy
1976-1977		University Claude Bernard, Lyon, France, Electro-Physiology
1977-1980	Ph.D.	University Wageningen, Wageningen, the Netherlands, Neurophysiology
1979-1980		University Leiden, Leiden, the Netherlands, Didactics, Psychology
1992-1993		De Baak, Noordwijk, the Netherlands, Business Administration

Employment and Academic Appointments:

1977-1980 'Wetenschappelijk Medewerker' (a position that is similar to an Assistant Professor) with the Netherlands Organization for the Advancement of Pure Research (ZWO) in the Department of Animal Physiology, Wageningen, The Netherlands.

- 1980-1986 HBO Institute Twente, the Netherlands. Faculty Member, Neurophysiology and Neuroanatomy (similar to Full Professor position). Founder and Director of the Medical Technology Department.
- 1986-1993 Benelux Application Engineer with Nicolet Instrument Benelux, located in Brussels, Belgium
- 1990-1993 International Application Specialist and General Manager of the Dutch Branch Office with Nicolet Instrument.
- 1993-2000 Senior Application Scientist with Nicolet Biomedical Inc., Madison, WI.
- 1993-2000 Manager Advanced Applications with Nicolet Biomedical Inc., Madison, WI
- 1995-2000 R&D Manager of Monitoring Products with Nicolet Biomedical Inc., Madison, WI.
- 2001-2006 Senior Research Professional, Section of Pediatric Neurology, Technical Director and Director of Research, Pediatric Epilepsy Center, Department of Pediatrics, the University of Chicago.
- 2003- Senior Fellow, the Computation Institute of the University of Chicago and Argonne National Laboratory.
- 2006- Assistant Professor, Technical Director and Director of Research, Pediatric Epilepsy Center, Department of Pediatrics, the University of Chicago.

Honors and Awards:

- 1973-1976 Research and Teaching Assistant Neurophysiology and Anatomy Award for 'Kandidaatsexamen'
- 1976-1977 Honor Research Grant, University Claude Bernard, Lyon, France
- 1977 Doctoraal examen Cum Laude.
- 1981 Medical Teaching Award and License from the Dutch Minister.
- 1998 Green Card awarded on scientific merits.

Memberships:

American Association for the Advancement of Science,
The Society of Neuroscience,
The Chicago Chapter of Sigma Xi.

Clinical Roles:

- Operation of an eight system epilepsy monitoring system including archiving functions
- Technical Support Long-term EEG-Video Monitoring
- Recording of Evoked Potentials
- Cortical Mapping
- Intraoperative and Neuro-ICU Monitoring

Teaching Responsibilities:

- 1974-1977 Teaching Assistant Anatomy and Physiology, University Leiden.
- 1980-1986 Human Anatomy, Neuroanatomy and General Physiology, HBO Twente.
- 2002- Cluster-Group Leader during the Summer Program of Medical Students, The University of Chicago.

- 2004- Course: Mathematical and Statistical Methods for Neuroscience for graduate and advanced undergraduate students. II for UC and IIT students
- 2004- Member of PhD committees, Electrical and Computer Engineering, UIC
- 2006- Member of PhD committees, Biomedical Engineering IIT
- 2006- Course: Mathematical and Statistical Methods for Neuroscience for graduate and advanced undergraduate students. I for UC and IIT students

Experience based skills:

- Fluent in English, Dutch, French and German.
- Associate Editor *IJBEM*, Guest Editor *J. Clin. Neurophysiol*
- Ad hoc Reviewer: *J. Clin. Neurophysiol.*, *IEEE Trans. Biomed. Eng.*, *J. Neurosci. Meth.*, *Brain Topography*, *Neurocomputing*, *Psychopharmacology*, *Epilepsy Research*, *Eurasip JASP*, *Journal of Biomedical Discovery and Collaboration*.
- Referee *The 2004 and 2005 IMIA Yearbook of Medical Informatics*
- Programming Languages (PLI, APL, Assembly, Fortran, Visual C++, Basic, and MatLab).
- Co-founder and Organizer of the Epilepsy Research Seminar series at UC (since 2001, an initiative with V.L. Towle, Ph.D.)
- Consultant University of Texas Health Science Center at Houston on behalf of the Center for Clinical Research and Evidence-Based Medicine, Department of Pediatrics.
- R&D Director of a 20 man-year International Project.
- Completed Studies for 510(k) FDA Approval (Event Detection, Ambulatory EEG, Intra-Operative Monitoring).
- Organized two sequential International Meetings on Neuromonitoring (Los Angeles, CA, 1997; Paris, France, 1998).
- Session Organizer. Invited Session 11.1 IEEE EMBS conference San Francisco, September 2004. Invited Session International Conference on Bioelectromagnetism Minneapolis, May 2005.
- Scientific Program Committee Member, International Conference on Bioelectromagnetism Minneapolis, May 2005.
- Principle organizer of an International Epilepsy Meeting "An Overview of Epilepsy Research: What, Where, When, and Why?" May 19, 20, 2006 at the University of Chicago

Current Investigations:

(note that Dr. van Drongelen held positions in industry 1986-2001):

Simulation of neural networks using Hodgkin and Huxley type of membrane models, including large-scale models for parallel computing (2000-current).

Study of cellular and network activity in neocortical tissue slices of mouse and patients with epilepsy(2001-current).

Using non-linear techniques in seizure prediction in pediatric epilepsy patients (2001-current).

Comparison of source localization algorithms in pediatric epilepsy patients (1996 - current).

Monitoring of the nervous system in the intensive care environment (2002 - current).

Original Peer-Reviewed Articles:

Schoonhoven LM, Tramper NM, and Drongelen W van (1977) - Functional diversity in gustatory receptors in some closely related Yponomeuta species (Lep.), *Neth. J. Zool.*

27:287-291.

- Drongelen W van (1978) - Unitary recordings of near threshold responses of receptor cells in the olfactory mucosa of the frog, *J. Physiol. Lond.* 277:423-435.
- Drongelen W van, Holley A, and Doving KB (1978) - Convergence in the olfactory system: quantitative aspects of odour sensitivity, *J. Theor. Biol.* 71:39-48.
- Drongelen W van (1978) - The significance of contact chemoreceptor sensitivity in the larval stage of different *Yponomeuta* species, *Ent. Exp. & Appl.* 24:343-347.
- Drongelen W van (1979) - Pores in the insect contact chemosensory hair; a theoretical study, *Chem. Senses and Flavor* 4:117-126.
- Drongelen W van (1979) - Contact chemoreception of host plant specific chemicals in larvae of various *Yponomeuta* species (Lepidoptera), *J. Comp. Physiol.* 134:265-279.
- Drongelen W van, and Povel GDE (1980) - Gustatory sensitivity and taxonomic relationships in larvae of some *Yponomeuta* species (Lepidoptera), *Proc. Kon. Ned. Akad. Wet. (C)* 83:121-125.
- Drongelen W van (1980) - Behavioural responses of two small ermine moth species (Lepidoptera: Yponomeutidae) to plant constituents, *Ent. Exp. & Appl.* 28:54-58.
- Drongelen W van, and Loon JJA van (1980) - Inheritance of gustatory sensitivity in F1 progeny of crosses between *Yponomeuta cagnagellus* and *Y. malinellus* (Lepidoptera), *Ent. Exp. & Appl.* 28:199-203.
- Drongelen W van (1981) - Smaakgevoeligheid en waardplantkeuze van rupsen, *Vakbl. Biol.* 61:171-175.
- Drongelen W van, Pagnotte Y, and Hendriks MH (1982) - Primary events in odour detection, *Bull. Math. Biol.* 44:411-423.
- Drongelen W van, and Dullemeijer P (1982) - The feeding apparatus of *Caiman crocodilus*: a functional morphological study, *Anat. Anz.* 151:337-366.
- Drongelen, W van, Yuchtman, M, Van Veen, BD, and Huffelen AC van (1996) - A spatial filtering technique to detect and localize multiple sources in the brain, *Brain Topography* 9: 39-49.
- Van Veen, BD, Drongelen, W van, Yuchtman, M, and Suzuki, A (1997) - Localization of brain electrical activity via linearly constrained minimum variance spatial filtering, *IEEE Trans. Biomed. Eng.* 44: 867-880.
- Drongelen W van, Koch H, Marcuccilli C, Hecox K and Ramirez JM (2003) - Is burst activity in cortical slices a representative model for epilepsy? *Neurocomputing* 52-54: 963-968.
- Drongelen W van Hecox K (2003) - Desynchronization of neural activity in a network model. *Neurocomputing* 52-54: 425-430.
- Hecox KE, Nayak S, McGee A, and Drongelen W van (2003) - Application of non-linear time series to neonatal EEG activity. *Neurocomputing* 52-54: 779-786.
- Zhang X, Drongelen W van, Hecox K, Towle VL, Frim DM, McGee A, Lian J, and He B (2003) - Localization of epileptic foci by means of cortical imaging using a spherical head model. *Neurocomputing* 52-54: 977-982.
- Drongelen W van, Koch H, Marcuccilli C, Pena F and Ramirez JM (2003) - Synchrony levels during evoked seizure-like bursts in mouse neocortical slices. *J. Neurophysiol.* 90: 1571-1580.
- Zhang X, Drongelen W van, Hecox KE, Towle VL, Frim DM, McGee AB, He B (2003) - High Resolution EEG: Cortical Potential Imaging of Interictal Spikes. *Clinical Neurophysiology* 114: 1963-1973.

- Drongelen W van, Nayak S, Frim DM, Kohrman MH, Towle VL, Lee HC, McGee AB, Chico MS, and Hecox KE (2003)- Seizure anticipation in pediatric epilepsy: use of Kolmogorov entropy. *Pediatric Neurology* 29: 207-213.
- Drongelen W van, Lee HC, Hereld M, Jones D, Cohoon M, Elsen F, Papka ME, Stevens RL (2004) – Simulation of neocortical epileptiform activity using parallel computing. *Neurocomputing* 58-60: 1203-1209.
- Fontanarosa JB, Lasky RE, Lee HC, Drongelen W van (2004) – Localization of brainstem auditory evoked potentials in primates: a comparison of localization techniques applied to deep brain sources. *Brain Topography*. 17: 99-108.
- Lai Y, Drongelen W van, Ding L, Hecox KE, Towle VL, Frim DM, He B (2005) – In vivo human skull conductivity estimation using simultaneous extra- and intra-cranial electrical potential recordings. *Clin. Neurophysiol.* 116:456-465.
- Drongelen W van, Lee HC, Koch, Hereld M, H, Elsen F, Chen Z, Stevens RL (2005) – Emergent epileptiform activity in neural networks with weak excitatory synapses. *IEEE Trans. Neur. Sys. & Rehab.* 13: 236-241.
- Zhang Y, Ding L, van Drongelen W, Hecox K, Frim D, He B(2006) - Cortical Potential Imaging by Means of the Finite Element Method and its Application to Simultaneous Extra- and Intra-cranial Electrical Recordings, *NeuroImage*, 31:1513-24.
- Drongelen W van, Koch H, Elsen F, Doren E, Lee H, Marcuccilli C, Hereld M, Stevens R, and Ramirez J-M (2006) - The role of persistent sodium current in bursting activity of mouse neocortical networks in vitro. *J. Neurophysiol.* 96:2564-77.
- Zhang Y, van Drongelen W, He B(2006) – Estimation of in vivo brain-to-skull conductivity ratio in humans. *Applied Physics Letters* 89: 223903
- Hereld M, Stevens RL, Lee HC, and van Drongelen W (2007) – Framework for interactive million-neuron simulation. *J. Clin. Neurophysiol.* 24: 189-196.
- Drongelen W van, Lee HC, Stevens RL and Hereld M (2007) – Propagation of seizure-like activity in a model of neocortex. *J. Clin. Neurophysiol.* 24:182-188.
- Hyong C Lee, Wim van Drongelen, Arnetta B. McGee, David M. Frim, and Michael H. Kohrman (2007) – comparison of seizure detection algorithms in continuously monitored pediatric patients. *J. Clin Neurophysiol.* 24: 137-146.
- Lei Ding, Christopher Wilke, Bobby Xu, Xiaoliang Xu, Wim van Drongelen, Michael Kohrman, and Bin He (2007) - EEG Source Imaging: Correlating Source Locations and Extents with Electrocorticography and Surgical Resections in Epilepsy Patients. *J. Clin Neurophysiol.* 24: 130-136.
- Drongelen W van (2007) – Guest Editorial. *J. Clin Neurophysiol.* 24: 85-86.
- Lai Y, van Drongelen W, Hecox K, Frim D, Kohrman M, He B. (2007) - Cortical activation mapping of epileptiform activity derived from interictal ECoG spikes. *Epilepsia.* 48:305-314
- Williams AL, van Drongelen W, Lasky RE (2007) Noise in contemporary neonatal intensive care. *J Acoust Soc Am.* 121:2681-90.

Patents:

- Drongelen W van (2001) - Medical signal monitoring and display, US Patent US 6,224,549 B1, May 1 2001.
- Drongelen W van (2003) – Electrode disconnect system and method for medical signal

monitoring, US Patent, Patent #: 6560479.

Non-Peer Reviewed Original Articles (Chapters PhD Theses):

- Witpaard J, & Drongelen W van (1976). Intracellular recordings in the optic tectum of the frog. In: Witpaard J. Frogs Vision, pp. 86-99, Thesis, Leiden.
- Drongelen W van, Groot CJ, & Loon JJA van (1980). Computerized analysis of multi-unit spike activity. In: Drongelen W van. Comparative Aspects of Taste Receptors and Host Plant Selection in Larvae of Various Yponomeuta Species (Lepidoptera). Pp. 44-51. Thesis, Wageningen.
- Drongelen W van (1983) - Massage, *Beter blijven en worden* 1,1:16-17.
- Drongelen W van (1984) - Elektrotherapie, *Beter blijven en worden* 1,2:32-35.

Text Books:

- Drongelen W van (1987) - Neuromusculaire Biologie van de Mens, de Tijdstroom, Lochem. (An undergraduate textbook Human Neuromuscular Biology, in Dutch).
- Drongelen W van (2006) - Signal Processing for Neuroscientists: Introduction to the Analysis of Physiological Systems, Elsevier, Amsterdam.

Book Chapters:

- Lycklama a Nijeholt J, Drongelen W van & Hilhorst BEJ (1989) - Topographic mapping of event-related potentials as a diagnostic tool for identification of dyslexic persons, In: Topographic brainmapping of EEG and evoked potentials, (ed. Maurer K), pp. 522-526, Springer Berlin.
- Drongelen W van (1990) - Interpolation methods for reconstruction of scalp potentials, In: Psychophysiological Brain Research, (eds. Brunia CHM, Gaillard AWK & Kok A), pp. 36-39, University Press Tilburg.
- Drongelen W van, Lee, HC, Hecox, KE (2005) - Seizure Prediction in Epilepsy. In: *Neural Engineering* (ed. He, B.) Kluwer Academic, New York (2005).
- Wim van Drongelen, Amber Martell, and Hyong C. Lee – Neocortical Epileptiform Activity in Neuronal Models with Biophysically Realistic Ion Channels. In: *Computational Neuroscience in Epilepsy* (eds. Soltesz I and Staley S). *in press*.

Abstracts:

- Drongelen W van, and Dullemeijer P (1976) - Een paradigma voor de mandibula van Caiman crocodilus, *Ned. T. Geneesk.* 120:234-235.
- Drongelen W van (1977) - Responses of frog olfactory receptors to stimuli at threshold concentrations, In: *Olfaction and taste VI*, (eds. le Magnen J & MacLeod P), pp. 207, Information Retrieval Ltd London.
- Monte, C, and Drongelen, W van (1995) - Topographic differences between the contingent negative variation (CNV) of schizophrenics as compared to normal subjects, *Electroenceph. Clin. Neurophysiol.* 95: 110P.
- Drongelen, W van, Nenov, V, Schwartz, D, Yuchtman, M, Markov, S, and Buxley, F (2000) - A multimodality monitoring system, *Soc. Neurosci. Abstr.* Vol 26, Part 1: 255.
- Hecox, KE, Drongelen W van, Towle, VL, Chico, M, Kohrman, M, McGee, A, and Frim, D (2001) – Validation methods for source-localization algorithms. *Epilepsia* 42, Suppl. 7: 37.

- Zhang X, Drongelen W van, Hecox K, Towle VL, Frim DM, McGee A, Lian J, and He B (2002) - Cortical imaging of interictal epileptiform activity using an inhomogeneous spherical head model. Poster 5th International Conference on Bioelectromagnetism
- Drongelen W van, Hereld M, Lee HC, Papka ME, and Stevens RL (2002) – Simulation of neocortical activity. *Epilepsia* 43, Suppl 7: 149.
- Ramirez JM, Koch H, Pena F, Drongelen W van, Hecox KE, Frim DM, Chico MS, and Marcuccilli CJ (2002) – Characterization of neuronal activity in human neocortical slice preparations obtained from the seizure focus of pediatric patients. *Epilepsia* 43, Suppl 7: 265.
- Koch H, Drongelen W van, Marcuccilli CJ, Hecox KE, and Ramirez JM (2002) – Substance P induces bursting in neocortical neurons recorded in slice preparations of mice. *Epilepsia* 43, Suppl 7: 5-6.
- Marcuccilli CJ, Koch H, Drongelen W van, Hecox KE, and Ramirez JM (2002) – NMDA application changes membrane properties from regular spiking into bursting in a subpopulation of cortical neurons. *Epilepsia* 43, Suppl 7: 131.
- Towle VL, Simon S, Dwyer JE, Hunter J, Reimer J, Drongelen W van, Kohrman M, Chenkeli S (2002) – Analysis of ECoG coherence patterns recorded from epileptic patients is helpful for delineating the borders of epileptogenic tissue. *Epilepsia* 43, Suppl 7: 114.
- Drongelen W van, Koch H, Hecox KE, Marcuccilli CJ, Ramirez JM (2002) – NMDA and substance P induces bursting in cortical neurons recorded from mouse slice preparations. Program No. 601.9. 2002 Abstract Viewer/Itinerary Planner. Washington DC: Society for Neuroscience.
- Koch H, Pena F, Drongelen W van, Hecox KE, Frim DM, Chico MS, Ramirez JM, and Marcuccilli CJ (2002) – Neural activity characterized in neocortical slices obtained from the epileptic focus of pediatric patients. Program No. 795.5. 2002 Abstract Viewer/Itinerary Planner. Washington DC: Society for Neuroscience.
- Weese-Mayer MD, Kenny A, Koch H, Hayes M, Drongelen W van, and Ramirez JM (2002) – Breath to breath variability in children with CCHS. Poster 13TH International Symposium on the Autonomic Nervous System.
- Drongelen W van, Koch H, Peña F, Tryba A, Parkis M, Loweth J, Hecox KE, Kohrman M, Frim D, Chico MS, Ramirez J-M, and Marcuccilli CJ (2003) - Differences in bursting properties between least and most abnormal tissue obtained from pediatric patients with intractable epilepsy, Program No. 99.15.2003 Abstract Viewer/Itinerary Planner. Washington DC: Society for Neuroscience.
- Zhang X, Drongelen W van , Hecox K, Towle VL, Frim DM, McGee A, He B (2003) – Cortical imaging of epileptiform activity from interictal spikes in pediatric epilepsy patients, Program No. 863.10. 2003 Abstract Viewer/Itinerary Planner. Washington DC: Society for Neuroscience.
- Koch H, Drongelen W van, Marcuccilli CJ and Ramirez J-M (2003) – Are slow oscillations in somatosensory cortex of mice dependent on the persistent sodium current? Program No. 411.18. 2003 Abstract Viewer/Itinerary Planner. Washington DC: Society for Neuroscience.
- Loweth, JA, Drongelen W van, Ramirez J-M (2003) – Stimulation-induced changes in intrinsic excitability of neocortical neurons. Program No. 377.10. 2003 Abstract Viewer/Itinerary Planner. Washington DC: Society for Neuroscience.
- Hecox KE, Kohrman MH, Song A, Mitchell L, Chico M, Lee, H, Drongelen W van (2003) – A

- comparative analysis of seizure detection using non-linear systems measures in the Pediatric age group. *Epilepsia* 44, Suppl 9: 229-230
- Kohrman MH, Song AN, O'Connor SE, Chico MS, Marcuccilli CJ, Drongelen W van, McGee A, Hecox KE (2003) – Patterns of abnormalities observed in dynamic systems analysis of neocortical seizures. *Epilepsia* 44, Suppl 9: 230
- O'Connor SE, Chico MS, Song AN, Mitchell L, Marcuccilli CJ, Kohrman MH, Drongelen W van, Hecox KE (2003) – Rapid cycling of vagus nerve stimulators (VNS) may worsen seizure control. *Epilepsia* 44, Suppl 9: 325
- Herzing LBK, Hecox KE, Drongelen W van, Frim DM, Chico MS, Marcuccilli CJ (2003) – Expression of voltage gated ion channel subunits in pediatric cortical epilepsy. *Epilepsia* 44, Suppl 9: 217-218
- Drongelen W van, Koch H, Loweth J, Marcuccilli C, Pena F, Hecox K, Ramirez J-M (2003) – Activity in neocortical micro-circuitry during seizure-like discharges: synchronization and rhythmicity. *Epilepsia* 44, Suppl 9: 211
- Marcuccilli CJ, Koch H, Pena F, Drongelen W van, Tryba AK, Parkis MA, Hecox KE, Kohrman MH, Frim DM, O'Connor SE, Chico MS, Ramirez J-M (2003) – Rational pharmacotherapy: relationship between *in vitro* electrophysiology and clinical measures. *Epilepsia* 44, Suppl 9: 244-245
- Ramirez J-M, Koch H, Pena F, Drongelen W van, Tryba AK, Parkis MA, Loweth JA, Hecox KE, Kohrman MH, Frim DM, Chico MS, Marcuccilli CJ (2003) – *In vitro* electrophysiological differences between least and most abnormal tissue obtained from pediatric patients with intractable epilepsy. *Epilepsia* 44, Suppl 9: 245-246
- Marcuccilli C, Drongelen W van, Hecox K, Frim D, and Ramirez J.-M. (2004) - Neocortical cellular activity in children with epilepsy. Child Health Research Centers Annual Retreat.
- Carroll MS, Lee HC, Drongelen W van, Kohrman MH (2004) – Physiological state may confound seizure prediction algorithms using nonlinear metrics. APSS 18th annual meeting.
- Drongelen W van, Lee HC, Koch, H, Elsen F, Carroll MS, Hereld M, Stevens RL (2004) – Interaction between cellular voltage-sensitive conductance and network parameters in a model of neocortex can generate epileptiform bursting. Invited Presentation IEEE Catalog No: 04CH37558C, ISBN: 0-7803-8440-7: 4003-4005a.
- Hereld M, Stevens RL, Drongelen W van, Lee HC (2004) – Developing a petascale neural simulation. Invited Presentation IEEE Catalog No: 04CH37558C, ISBN: 0-7803-8440-7: 3999-4002.
- Drongelen W van, Koch H, Marcuccilli CJ, Viemari J, Tryba AKH, Loweth JA, Ramirez J-M, Elsen F (2004) – Persistent sodium current plays a critical role in the generation of slow oscillations in vitro neocortex brain slices of mice and humans. Abstract Soc Neuroscience
- Lee HC, Hereld M, Stevens R, Drongelen W van (2005) – Epileptiform activity patterns in coupled neural networks. 5th International Conference BEM&NFSI, Minneapolis, MN.
- Hereld M, Stevens RL, Teller J, Drongelen W van, Lee HC (2005) – Large neural simulations on parallel computers. 5th International Conference BEM&NFSI, Minneapolis, MN.
- Lai Y, Drongelen W van, Zhang X, Frim DM, Hecox KE, He B (2005) – Noninvasive localization of epileptiform interictal spikes by means of cortical imaging using realistic head geometry boundary element head models. 5th International Conference BEM&NFSI, Minneapolis, MN.

- Lai Y, Drongelen W van, Ding L, Hecox KE, Towle VL, Frim DM, He B (2005) – Estimation of in vivo human brain-to-skull conductivity ratio by means of cortical potential imaging. 5th International Conference BEM&NFSI, Minneapolis, MN.
- Lasky RE, Williams AL, Drongelen W van, Gray LC (2005) – Noise in neonatal intensive care units (NICUs) and its effect on high risk newborns. Abstract Minneapolis, MN: Noise-Con 2005.
- Elsen FP, Penn RD, Drongelen W. van (2005) – Epileptic seizure models and effects of electrical extracellular stimulation. Abstract Washington DC: Society for Neuroscience.
- Drongelen W van, Doren EL, Koch H, Marcuccilli CJ, Ramirez J-M, Elsen FP (2005) – Characterization of the persistent sodium current in neocortical networks of mice and humans. Abstract Washington DC: Society for Neuroscience.
- Marcuccilli CJ, Doren EL, Drongelen W van, Ramirez J-M (2005) - Differential effects of two anticonvulsants on seizure-like activity in neocortical neurons, Abstracts Washington DC: AES.
- Lai Y, Drongelen W van, Frim D, Hecox K, He B (2005) - Noninvasive Cortical Imaging of Ictal Discharges by means of a Realistic Boundary Element Head Model, Abstracts Washington DC: AES.
- Lee HC, van Drongelen W, Mc Gee AB, Frim DM, Kohrman MH (2006) – Detection of epileptiform activity in continuously monitored pediatric patients. Abstract American Epilepsy Society.
- Hereld M, Lee HC, van Drongelen W and Stevens RL (2007) – Image-based configuration and interaction for large-scale neural network simulations. Abstract Computational Neuroscience Meeting CNS 2007 Toronto, Canada.
- Martell A, Marler S, Lee HC, Ramirez J-M, van Drongelen W (2007) – An increased N-methyl-D-aspartate receptor conductance is associated with intrinsic bursting behavior. Abstract Computational Neuroscience Meeting CNS 2007 Toronto, Canada.
- Benayoun M, Dwyer J, Lee HC, Hereld M, Stevens RL, van Drongelen W (2007) – Simulated-annealing as a tool to identify parameter values associated with epileptiform activity in single-neuron and network compartmental models. Abstract Computational Neuroscience Meeting CNS 2007 Toronto, Canada.

Manuscripts in Preparation:

Drongelen W van, Williams AL, and Lasky RE – Spectral analysis of heart rate in Neonates. *IEEE Trans. Biomed. Eng.*

Presentations and Invited Lectures:

- Drongelen W van (2001). Seizure detection, anticipation, and prediction in pediatric epilepsy patients. Presentation in the Special Interest Group during the AES/ACNS joint meeting.
- Drongelen W van (2001). Bringing quantitative neurobiology to epilepsy, Part I. Presentation for the Computational Neuroscience Seminar Series. The University of Chicago.
- Drongelen W van (2001). Can EEG activity patterns be predicted? Presentation in The First Annual Neural Coding Workshop, Committee on Computational Neuroscience, The University of Chicago Neurobiology, Pharmacology and Physiology Cluster.
- Hecox, KE, & Drongelen W van (2001). The chaotic world of children. Presentation in the Fellows Meeting of the Computational Institute.
- Drongelen W van (2002) – Overview of research Activities: Seizure Anticipation, Presentation

- for Medtronic Neurological, Minneapolis, MN
- Drongelen W van (2002) – On the Prediction and Mechanisms of Epileptic Seizures. Bioengineering, Seminars UIC.
- Drongelen W van (2002) – Overview of Research Activities: Synchrony and Recruitment, Presentation for Medtronic Neurological, Minneapolis, MN
- Drongelen W van (2002) – Experimental Models and Computer Simulation in Epilepsy. Presentation Computation Institute.
- Drongelen W van (2003) - Modeling of Neural Activity, Guest Lecture UIC
- Drongelen W van (2003) - Overview of Research Activities: Modeling, Cellular Mechanisms, and Seizure Anticipation, Lecture at the Institute of Neurobiology, University of Amsterdam, Amsterdam, The Netherlands.
- Drongelen W van (2003) - Neocortical Seizure Activity in Children: A Modeling and Experimental Approach, Presentation in the ‘Technological Frontiers in Pediatric Epilepsy’ Seminar, The University of Chicago.
- Drongelen W van (2003) – EEG Monitoring, In Service Lecture for Nursing Staff.
- Drongelen W van (2003) – Modeling of Neural Activity using General Neural Simulation System GENESIS, Invited Lecture Computational Methods for Systems Biology (The University of Chicago, CMSC 37720)
- Drongelen W van (2003), (2004) - Prediction is Difficult, especially of the Future: Seizure Prediction in Epilepsy. Invited Lecture Howard Hughes Summer Program in Neural computation and Engineering
- Drongelen W van (2004) – Seizure Prediction, A Series of Presentations for Medtronic Neurological, Minneapolis, MN
- Drongelen W van (2004) – Large scale modeling of network synchronization in seizures. Lecture For the Midwest Pediatric Neurology Conference, Chicago, IL
- Drongelen W van, Lee HC, Koch, H, Elsen F, Carroll MS, Hereld M, Stevens RL (2004) – Interaction between cellular voltage-sensitive conductance and network parameters in a model of neocortex can generate epileptiform bursting. IEEE EMBS San Francisco Invited presentation.
- Drongelen, W van and Elsen F (2005) – Computational Neuroscience in Epilepsy. Presentation Medical College Milwaukee, WI
- Drongelen, W van (2005) – Emergent Behavior in Models of Neocortical Neural Networks – Possible Mechanisms of Epileptiform Activity, Presentation UIC, Chicago, Ill
- Drongelen, W van (2005) – Computational Neuroscience in Epilepsy, Presentation Northern Illinois De Kalb, Ill
- Drongelen, W van (2005) – Epileptiform Activity Patterns in Neocortical Networks, Presentation SUNY Downstate, New York, NY
- Drongelen W van (2006) – Effects of Electrical Stimulation in neocortical Networks. Presentation January 2006 for Medtronic Neurological, Minneapolis, MN
- Drongelen, W van (2006) – Emergent epileptiform activity in neocortical networks, *Gordon Research Conference on Mechanisms of Epilepsy and Neuronal Synchronization.* at Colby College, Waterville, Maine, August 2006.



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Faculty Research Programs



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Research Interests:

My research focuses on: (1) Underlying neuronal mechanisms in epilepsy (synchrony, recruitment, oscillation, weak coupling). (2) Relationships between neuronal activity at different scales (neuron, network, brain). (3) Detection and prediction of brain electrical activity during seizures using various signal processing techniques (correlation dimension, Kolmogorov entropy, wavelet analysis). (4) Localization of sources from surface recordings (dipole analysis, MUSIC, LORETA, spatial filtering). (5) Monitoring of the nervous system in the intensive care environment (EEG, evoked potential).

[Further Information](#) on Wim van Drongelen's research.

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Expertise:

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Specific research projects:

- Large scale modeling of neocortical networks
- Wavelet analysis and seizure detection in pediatric records
- Electrical stimulation and seizure activity in neocortex

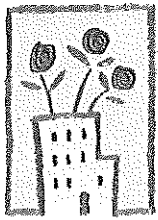
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Re: University of Chicago's EB-2 Petition on behalf of
Seoan Marler

Dear Sir or Madam,

This letter is to support the University of Chicago's petition on behalf of Seoan Marler, an employee I believe possesses exceptional ability in the sciences. This letter will give an overview of my background and current work and research, followed by an explanation of what Ms. Marler does in the course of her work.

My Background & Work at the University of Chicago Children's Hospital

I am a Board Certified physician in Pediatric Neurology, with a special competency in child neurology, Sleep Medicine and Clinical Neurophysiology. I have been practicing medicine since 1981. I attended Rush Medical College, Chicago, and did my Internship and Residency at the University of Chicago Hospitals. I went on to do Fellowships at the University of Chicago Hospitals and the University of Illinois, Chicago (clinical neurophysiology). I am a member of the American Academy of Neurology, the American Electroencephalographic Society, the American Epilepsy Society, the American Sleep Disorders Association, the Child Neurology Society, the Epilepsy Foundation of America and the Tuberous Sclerosis Alliance.

I am an expert in the care of children with neurological problems, especially sleep disorders, epilepsy, and seizures. I am also a member of the Hospitals' Pediatric Epilepsy Center team and director of the Pediatric Clinical Neurophysiology Lab, and this is where I have become familiar with Ms. Marler's work.

Seoan Marler's Work at the University of Chicago

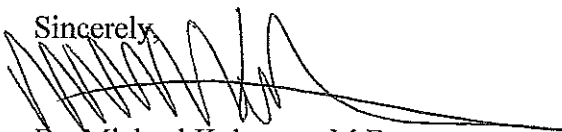
Children diagnosed with epilepsy may be candidates for surgical intervention in an effort to prevent future episodes. The surgery is usually to remove the part of the brain that is generating seizures. To map the focal point of seizures it is necessary to utilize intracranial electrodes that are placed directly on the brain surface. The patients will go under major operation, as the skull is removed and all the electrodes are placed on the brain surface. Then the skull is put back on the brain and the skin is stapled back in place. The usual EEG recording that is placed on the scalp is simultaneously done. Once the seizures are captured, I map the focal point to the nearest millimeter. The surgeon carefully removes that focal point in an effort to excise the problem area. While this type of surgery is scientifically cutting-edge, surgery is invasive and traumatic by definition. Eradicating the need for it in some children would be very beneficial, and Ms. Marler's research could help make that goal a reality.

I am aware of Ms. Marler's project involving mathematical analyses of the brain waves (EEG) collected from patients. This is of particular interest to me, because reading the EEG falls within the realm of my expertise. I understand that it has been explained in depth in other letters of support of the University's petition on her behalf, so I will not do so again here.

Conclusion

I believe Ms. Marler's research is a very integral part of potentially finding new ways to prevent and treat childhood epilepsy. Advances in medicine only occur when high intellect, creativity and the tireless pursuit of answers converge. She brings these criteria to bear each and every day she endeavors to find answers to the questions faced by many parents, and their children, stricken with has been creative, groundbreaking in many respects, and an integral part of the team approach taken by the University of Chicago Hospital in working towards controlling or eradicating a devastating childhood disease. Her research has been exceptional in every way.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael Kohrman', with a long horizontal line extending to the right.

Dr. Michael Kohrman, M.D.

Associate Professor

Pediatrics & Neurosurgery

The University of Chicago Children's Hospital

Curriculum Vitae

MICHAEL H. KOHRMAN, MD.

Address: Department of Pediatrics MC3055
University of Chicago
5841 S. Maryland Ave Chicago Il 60615
Phone: 773-702-6487

Education

- 1977-1981 M.D. Rush Medical College, Chicago, Ill.
- 1976-1977 M.S. Chemistry, Stanford University, Stanford, Ca.
Combined B.S.-M.S. Program in Chemistry
Thesis: Gas Chromatography of Marine Sterols
- 1973-1977 B.S. Chemistry with Honors, Stanford University, Stanford, Ca.

Employment Record

- 1999- Associate Professor of Pediatrics and Neurology, University of Chicago
- 2000- Director Pediatric Clinical Neurophysiology University of Chicago Children's Hospital
- 2004- Director Tuberous Sclerosis Clinic University of Chicago
- 2006- Interim Director Pediatric Epilepsy Program University of Chicago
- 1998-1999 Associate Professor of Pediatrics, University of Florida College of Medicine
- 1996-1998 Associate Professor of Clinical Neurology, State University of New York at Buffalo
- 1995-1998 Director of Fellowship Program in Clinical Neurophysiology, Department of Neurology State University of New York at Buffalo
- 1994-1996 Clinical Associate Professor of Neurology and Pediatrics, State University of New York at Buffalo

- 1994-1998** Head of Clinical Neurophysiology Program, Department of Neurology, State University of New York at Buffalo.
- 1994-1998** Director of Intra-Operative Monitoring Buffalo General Hospital
- 1992-1996** Medical Director of Sleep Testing Associates.
- 1989-1992** Director of Apnea Evaluation Unit Children's Hospital of Buffalo
- 1987-1994** Assistant Professor Departments of Neurology and Pediatrics, State University of New York at Buffalo.
- 1987-1998** Director of Clinical Neurophysiology Laboratory Children's Hospital of Buffalo
- 1987-1998** Director of Sleep Laboratory Children's Hospital of Buffalo
- 1987-1998** Adjunct Clinical Professor of Electroencephalography Niagara County Community College
- 1986-1987** Assistant in the College of Medicine University of Illinois.
- 1986-1987** Electroencephalography Fellowship, Department of Neurology, University of Illinois, John Hughes M.D. Ph.D. Director
- 1983-1986** Fellowship, Pediatric Neurology, University of Chicago Hospitals and Clinics, Peter Huttenlocher M.D. Director
- 1982-1983** Residency, Pediatrics, University of Chicago Hospitals and Clinics, Lawrence Gartner M.D. Chairman
- 1981-1982** Internship, Pediatrics, University of Chicago Hospitals and Clinics, Lawrence Gartner M.D. Chairman

Hospital Appointments

University of Chicago Hospitals

Hinsdale Hospital

Board Certifications

- 2003-2013** Recertification American Board of Psychiatry and Neurology
Sub Speciality of Clinical Neurophysiology
- 1992-2002** American Board of Psychiatry and Neurology
Neurology with Special Competency in Child Neurology With added Qualification in
Clinical Neurophysiology
- 1991** American Board of Sleep Medicine
- 1988** American Board of Clinical Neurophysiology
- 1987** American Board of Pediatrics
- 1987** American Board of Psychiatry and Neurology
Neurology with Special Competency in Child Neurology
- 1982** National Board of Medical Examiners

Teaching (Full details in Teaching Portfolio)

Mentor and sponsor for medical students summer research program

Pediatric sleep record review Sleep Fellows

Supervision of Sleep Fellows in Pediatric Sleep Clinic

EEG Review Course for EEG Fellows and Residents UCCH

EEG conference for Resident and technical staff. UCCH

Developed and obtained ACGME approval for Neurophysiology Fellowship Training Program
SUNY at Buffalo New York

Director of Neurophysiology training for Residents: Curriculum development and implementation.
Didactic and laboratory instruction in electroencephalography, evoked potentials and
polysomnography. SUNY at Buffalo New York

Medical Director Neurodiagnostic Technician Training Program a joint program of State University
of New of New York at Buffalo School of Medicine and Biomedical Sciences and Niagara County
Community College. Responsibilities include curriculum development, didactic and laboratory
instruction to technology students.

Supervision of Adult Neurology, Child Neurology, and Pediatric Residents in Pediatric Neurology Inpatient and Outpatient locations.

Grand Rounds Presentations In Neurology, Pediatrics and Otolaryngology.
Presentations at National and regional meetings see below.

Introduction to Clinical Medicine: lectures and small group sessions.
Clinical Nurse Specialist Pharmacology course: Anticonvulsant Medication

Administrative Responsibilities

Director of Pediatric Epilepsy Program University of Chicago, responsible for Surface and Invasive Recording and Selection of Patients for Cortical Resection.

Medical Director Pediatric Clinical Neurophysiology Laboratory University of Chicago Children's Hospital Seven Beds for recording available for Video EEG Monitoring.

Designed Neurodiagnostic Digital Network at Children's Hospital of Buffalo for all Clinical Neurophysiology procedures. Supervised development and implemented a 3 Bed Epilepsy Monitoring Unit. State University of New York at Buffalo.

Director of Neurophysiology Fellowship and resident training in Neurophysiology State University of New York at Buffalo.

Director of Clinical Neurophysiology Laboratory at Children's Hospital of Buffalo.
Medical Director Neurodiagnostic Lab Buffalo General Hospital

Professional Organizations

American Academy of Neurology
Child Neurology Society
American Electroencephalographic Society
American Sleep Disorders Association
American Epilepsy Society
Epilepsy Foundation of America
Professional Advisory Board, Tuberous Sclerosis Alliance
Professional Advisory Board, Epilepsy Foundation of Greater Chicago

National and International Activities

2007	Invited speaker	Vagus nerve stimulation a pediatric Perspective North Shore Pediatric Neurology Dinner April 24 2006
2006	Invited Speaker	Epilepsy from the Bedside to the be Bench And back to the Bedside Grand Rounds University of New Mexico Nov. 10, 2006
2006	Invited Speaker	National Tuberous Sclerosis Alliance Conference TSC 101 a talk for newly diagnosed patients. Blomingdale Il July 13, 2006
2006	Invited Speaker	CINNR International Conference An Overview of Epilepsy Research: What, When, Where and Why ? “ What is Epilepsy Clinical Perspectives on the Diagnosis and Treatment. Chicago May 19 2006.
2005	Invited Speaker	Los Angeles Tuberous Sclerosis Alliance “Meet the Expert” Los Angeles Ca. September 30 2005
2004	Invited Participant	Pharmacological Management of Insomnia in Children and Adolescents. National Sleep Foundation Baltimore MD. November 1-2, 2004
2003-	Member	Tuberous Sclerosis Alliance Professional Advisory Board.
2002-2003	Member	Clinical Practice Review Committee American Academy of Sleep Medicine
2002-2004	Examination Committee	American Board of Sleep Medicine Part2 Examination Committee Member

2002	Speaker	Pediatric Sleep Disorders Focus Conference on Respiratory Therapy St. Louis MO. April 27,2002
2001	Invited Speaker	ENT Grand Rounds 1/25/01 University of Chicago
2001	Speaker	Sleep Disorders in Children Chicago Medical Society Midwest Clinical Conference February 24,2001
2001	Speaker	Sleep Disorders in Children Little Company of Mary Hospital Chicago Il March 14, 2001.
2001	Speaker	Sleep Disorders in Children La Rabida Clinical Conference Chicago April 6,2001
2001	Speaker	Sleep Disorders in Children ARCS
2001-	Member	Technology Committee for the American Epilepsy Society
2001- 2004	Examiner	American Board of Sleep Medicine Part 2
2001	Speaker	“ 2001 An Epilepsy Treatment Odyssey” South bend Memorial Hospital, South Bend Indiana , May 9, 2001
2000	Course Director	Second Annual Indiana Pediatric Day Merrillville, In. May 2000. Presentation: Sleep Disorders Masquerading as Common Pediatric Problems
1999	Invited Speaker	Epilepsy Update, Florida Pediatric Neurology Consensus Conference Orlando Fl, February 1999
1999	Invited Speaker	Sleep Disorders in Children, Neurology Grand Rounds University of Chicago October 1999

1999	Invited Speaker	Febrile Seizures, St. Elizabeth's Hospital Chicago Il. October 1999
1996- 1998	Consultant	American Academy of Pediatrics Task Force on Practice Parameters: Treatment of Child with First Simple Febrile Seizure.
1996	Course Coordinator	Pediatric Sleep Disorders Seminar, Child Neurology Society Meeting Minneapolis MN. September 1996
1996	Invited Speaker	Obstructive Sleep Apnea ,Pediatric Sleep Disorders Seminar, Child Neurology Society Meeting Minneapolis MN. September 1996
1996	Invited Speaker	Evaluation of Neuro-Degenerative Disorders Neurology for the Primary Care Provider, University of Rochester School of Medicine and Dentistry, SUNY Health Science Center Syracuse and SUNY Buffalo Joint CME. Syracuse NY. May 1996.
1996-	Member	Training Committee Child Neurology Society
1993	Invited Speaker	Sleep Disorders Medicine Pediatric Neurology Course American Academy of Neurology Meeting New York, New York. April 1993
1992-	Consultant	Public Health Service Division of Vaccine Injury Compensation Annual Meeting of the Charles Henry Electroencephalographic Society, Buffalo New York, April 1994
1991	Invited Speaker	Sleep Disorders Neurology for the Primary Care Provider, University of Rochester School of Medicine and Dentistry, SUNY Health Science Center Syracuse and SUNY Buffalo Joint CME. Rochester NY. September 1991.

1991	Invited Speaker	Seizures Neurology for the Primary Care Provider, University of Rochester School of Medicine and Dentistry, SUNY Health Science Center Syracuse and SUNY Buffalo Joint CME. Rochester NY. September 1991.
1989	Invited Speaker	Sleep Problems in Pediatrics. Grand Rounds Department of Pediatrics University of Chicago. September 1989.
1988	Invited Speaker	Topographic Mapping of The Neonatal EEG. National Association of Neonatal Nurses annual Meeting Chicago Illinois, September 1988.
1988	Invited Speaker	Brain Resuscitation and Brain Death. National Association of Neonatal Nurses annual Meeting Chicago Illinois, September 1988.

EDITORIAL BOARD

2001	Pediatric Neurology
2004	Pediatric Neurosurgery

REVIEWER

Pediatric Research
Pediatric Neurology
Pediatrics
Neuropediatrics
Journal of Clinical Neurophysiology
Sleep
Sleep Medicine

BOOK REVIEWS:

Principles and Practice of Sleep Medicine

Kreiger, Roth and Dememt

Published by Sanders 2000

Pediatric Neurology 2001: 23 ;4,p 368

Handbook of Pediatric Epilepsy

Author: Jerome V. Murphy and Fereydoun Dehkharghani

Published by: Marcel Dekker, Inc. 1992

Research Communications in Psychology, Psychiatry and Behavior 1993:18, NOS. 3&4,147.

Diseases of the Nervous System in Childhood 2nd Edition

Author : Jean Acardi

Published by Mac Keith Press 1998

Pediatric Neurosurgery in 1998

University Activities

2005	Pediatric Faculty Compensation Committee University of Chicago
2001-2003	Search Committee Director Pediatric ER UCCH
1993-1996	BASAH Seminar Committee SUNYAB
1991-1992	Appeals Committee Medical School SUNYAB
1990-1992	Biomedical Research Committee, Faculty Council SUNYAB
1990-1998	Residency Advisory Committee, Department of Neurology SUNYAB
1989-1998	Continuing Education Committee, Department of Neurology SUNYAB
1989-1990	Residency Review Committee, Department of Neurology SUNYAB
1989-1990	Alternate Faculty Council SUNYAB
1987-1998	Curriculum Committee, Department of Neurology SUNYAB

Community Activities

2007	Speaker Day of Hope Conference Epilepsy Foundation of Greater Chicago
2006	Member Professional Advisory Board Epilepsy Foundation Greater Chicago
2006	Speaker TS Alliance of Greater Chicago
2003-2005	President Woodlawn Condominium Association
2003	Speaker TS Alliance of Greater Chicago
1999	East Side Community Health Center: Invited speaker Fl. Representative Chestnut, Sleep Disorders. Gainesville Fl.
1987-1998	Advisory Board Neurodiagnostic Technician Training Program, Niagara County

Community College
1987-1998 Professional Advisory Board of Epilepsy Society of Western New York
1987-1998 Speaker Epilepsy Information Night Epilepsy Society of Western New York
1989-1994 Substance abuse task force of Western New York
1989-1992 Advisory Committee Sudden Infant Death Foundation Western New York Chapter

Hospital Activities

1995-1998 Member Institutional Review Board, Children's Hospital of Buffalo
1994-1998 Peer-review physician, Children's Hospital of Buffalo
1990-1998 Morbidity and Mortality Committee, Children's Hospital of Buffalo
1990-1994 Utilization Review Committee, Children's Hospital of Buffalo

Grants

2007 UCB Pharma: A Multi-Center, Double-Blind, Historical Control, Randomized Conversion to Monotherapy Study With Keppra XR for Treatment of Partial Onset Seizures protocol #1280

2007 UCB Pharma: An Open-Label, Long-Term Follow-up Study with Keppra XR for Treatment of Partial Onset Seizures protocol #1281

2007 Marinus: A Double-Blind, Placebo-Controlled, Dose-Ranging Clinical Study To Evaluate The Safety, Tolerability, And Antiepileptic Activity Of Ganaxolone In Treatment Of Patients With Infantile Spasms protocol # 1042-0500

2007 Marinus: An open-label clinical study to evaluate the safety and antiepileptic activity of ganaxolone in treatment of patients diagnosed with infantile spasms. Protocol # 1042-0501

2006 GlaxoSmithKline: A Multi-Center, Double-Blind, Randomized Conversion to Monotherapy Comparison of Two Doses of Lamotrigine for the Treatment of Partial Seizures protocol # LAM 30055

2005-2007 Cephalon: A Phase 3, Randomized Double Blind, Placebo Controlled, Parallel-Group Study to Assess the Efficacy and Safety of Provigil (Modafinil) Treatment (100,200,400 mg/day) in Children and Adolescents With Excessive Sleepiness Associated with Narcolepsy (Protocol# 3027)

- 2005-2007** Cephalon: A Phase 3, Randomized Double Blind, Placebo Controlled, Parallel-Group Study to Assess the Efficacy and Safety of Provigil (Modafinil) Treatment (100,200,400 mg/day) in Children and Adolescents With Excessive Sleepiness Associated with Obstructive Sleep Apnea/Hypopnea Syndrome (Protocol# 3028)
- 2005-2007** Cephalon: A One year Open-Label, Flexible –Dosage Extension Study to Assess the Safety and Continued Effectiveness of Provigil (Modafinil) Treatment (100,200,400 mg/day) in Children and Adolescents With Excessive Sleepiness Associated with Narcolepsy or Obstructive Sleep Apnea/Hypopnea Syndrome (Protocol# 3029)
- 2005-2007** UCB Pharma: A Double-Blind Randomized, Multicenter, Placebo-Controlled, Inpatient, Maximum 34 Day Study of Levetiracetam Oral Solution (20-50 mg/kg/day) as Adjunctive Treatment of Refractory Partial Seizures in Pediatric Epileptic Subjects Ranging in age from 1 Month to Less Than 4 Years of Age.(Protocol# UCB N01009)
- 2005** UCB Pharma: A Multi-center, Open –Label , Long Term Followup Study of The Safety and Efficacy of Levetiracetam in Children with Partial Onset Seizures.(Protocol# UCB N011048)
- 2003** Elan Pharmaceuticals: Double Blind, Randomized, Multicenter,Parallel-Group Study of the Safety and Efficacy of Zonisamide 5mg/kg/day Versus 12mg/kg/day as Adjunctive Therapy in Children with Partial Seizures. (Protocol (ELN46046-305)
- 2003** Elan Pharmaceuticals: An Open-Label, Long Term Safety Study of Zonisamide as Adjunctive Therapy in Children with Partial Seizures. (Protocol (ELN46046-306)
- 2003** Shire: Carbatrol SPECT Study (Protocol # 433.401)
- 2002** UCB Pharma: Evaluation of the Efficacy and Tolerability of Levetiracetam Add-on Treatment in Refractory Pediatric Patients with Partial onset Seizures: A 28 Week Double Blind, Placebo Controlled Multicenter Trial (Protocol # UCBN159)
- 2002** UCB Pharma: A Multi-Center, Open-Label, Long-Term Follow-up study of the Safety and Efficacy of Levetiracetam in Children with Epilepsy (Protocol# UCB N157)
- 2002-** GlaxoWellcome: A Double Blind, Placebo Controlled, Add- On Clinical Trial of the Safety, Pharmacokinetics, and Efficacy of Lamictal in Pediatric Age Subjects (1-24 months) Protocol 20006

- 2002-2003** GlaxoWellcome: Open-Label, Multicenter, Randomized Trial to Evaluate The Development Of Components Of Polycystic Ovarian Syndrome (PCOS) In Female Subjects Initiating Lamotrigine or Valporate Either as Monotherapy for Newly Diagnosed Epilepsy or as Adjunctive Therapy for Inadequately Controlled Epilepsy (Protocol #30007)
- 1999** Parke Davis: Gabapentin Pediatric Add-on Trial: a Randomized Double Blind, 2-Period, Multicenter Study in Patients with Partial Seizures (Protocol 945-305)
- 1999** ViroPharma Incorporated. A multicenter Double Blind Placebo Controlled Trial of Pleconaril in the Treatment of Enteroviral Meningitis in Children and Adults.
- 1996** Parke-Davis Co. Gabapentin Pediatric Monotherapy Trial: A Multicenter, Double-Blind, Placebo-Controlled, Parallel-Group Study in Pediatric Patients with Benign Childhood Epilepsy with Central-temporal Spikes (BECTS) (Protocol 945-094)
- 1996** Parke-Davis Co. An extended Open-Label Gabapentin (CL-945) Pediatric Trial Following A Double-Blind (Protocol 945-094) Study in Pediatric Patients with Benign Childhood Epilepsy with Central-temporal Spikes (BECTS) (Protocol 945-095)
- 1996** Glaxo-Wellcome Co. A Multicenter, Double-Blind, Placebo-Controlled, Parallel Evaluation of Lamictal as Add-on Therapy with Valproic Acid for the Treatment of Generalized Seizures in Pediatric/Young Adult Patients (Protocol 105-045)
- 1996** Glaxo-Wellcome Co. An Evaluation of Lamotrigine Monotherapy for the Treatment of Newly-diagnosed Absence Seizures in Children and Adolescents.
- 1996** Burroughs Wellcome Co. An Open-Label Study of Lamictal in Pediatric Patients Who Previously Participated in a Lamictal Pediatric Trial.
- 1995** Burroughs Welcome Co. A Multicenter, Double-Blind, Placebo-Controlled, Parallel-Design Evaluation if Lamictal for Add-On Treatment of Partial Seizures in Pediatric Patients.
- 1994** Term Faculty Development Award. New York State/ United University Professions, Joint Labor Management Committee.
- 1989** Dantec Medical Inc. Normative data base for the Dantec Concerto.
- 1987** Janssen Pharmaceutical Flunarizine Trial for Alternating Hemiplegia.

- 1985 Children's Research Foundation, Chicago Illinois "The Use of Brain Electrical Activity Mapping to Localize Receptive Language in Left and Right Handed Individuals."
- 1976 Dryefus Foundation Research Stipend in Chemistry. Stanford University.

Thesis

Michael H. Kohrman: Gas Chromatography of Marine Sterols
Stanford University, 1977.

Peer Reviewed Publications

1. **Michael H. Kohrman** What is Epilepsy? Clinical Perspectives in the Diagnosis and Treatment. Journal of Clinical Neurophysiology. 24(2):87-95, April 2007.
2. Lei Ding; Christopher Wilke; Bobby Xu; Xiaoliang Xu; Wim van Drongelen; **Michael Kohrman**; Bin He EEG Source Imaging: Correlating Source Locations and Extents With Electrocoricography and Surgical Resections in Epilepsy Patients. Journal of Clinical Neurophysiology. 24(2):130-136, April 2007.
3. Hyong C. Lee; Wim van Drongelen; Arnetta B. McGee; David M. Frim; **Michael H. Kohrman** Comparison of Seizure Detection Algorithms in Continuously Monitored Pediatric Patients. Journal of Clinical Neurophysiology. 24(2):137-146, April 2007.
4. Vernon L. Towle; John D. Hunter; J Christopher Edgar; Sozari A. Chkhenkeli; Michael C. Castelle; David M. Frim; **Michael Kohrman**; Kurt E. Hecox Frequency Domain Analysis of Human Subdural Recordings. Journal of Clinical Neurophysiology. 24(2):205-213, April 2007.
5. Yuan Lai, Wim van Drongelen, Kurt Hecox, David Frim, **Michael Kohrman**, Bin He Cortical Activation Mapping of Epileptiform Activity Derived from Interictal ECoG Spikes Epilepsia 2007;48 (2), 305-314.
6. Sozari A. Chkhenkeli, Vernon L. Towle, George S. Lortkipandze, Jean-Paul Spire, Eteri Sh. Bregvadze, John Hunter, **Michael Kohrman**, David M. Frim. Mutually suppressive interrelations of symmetric epileptic foci in bitemporal epilepsy and their inhibitory stimulation. Clin Neuro. Neurosurg. 2007 Jan;109(1):7-22.

7. Musleh W, Yassari R, Hecox K, **Kohrman M**, Chico M, Frim D. Low incidence of subdural grid-related complications in prolonged pediatric EEG monitoring. Pediatr Neurosurg. 2006;42(5):284-7.
8. Michael E. Luc, BS¹, Anu Gupta, BS,¹ Jonathan M. Birnberg, BS ¹, Darian Reddick, BS¹, and **Michael H. Kohrman, MD.**²Characterization of Symptoms of Sleep Disorders in Children with Headache. Pediatric Neurology 2006;34:7-12.
9. Meoli Al; Rosen CL; KristoD; **Kohrman MH**; Gooneratne N; Aguillard RN; Fayle R; Troell R; Townsend D; Claman D; Hoban T; Mahowald M .Oral Nonprescription Treatment for Insomnia: An Evaluation of Products with Limited Evidence J Clin Sleep Med. 2005;1;2:173-187.
10. Su S, Barrody FM, **Kohrman MH**, Suskind D. A comparison of polysomnography and a portable home sleep study in the diagnosis of obstructive sleep apnea syndrome. Otolaryngol Head Neck Surg. 2004 Dec;131(6):844-50.
11. Meoli AL, Rosen CL, Kristo D, **Kohrman M**, Gooneratne N, Aguillard RN, Fayle R, Troell R, Kramer R, Casey KR, Coleman J Jr; Clinical Practice Review Committee; American Academy of Sleep Medicine. Upper airway management of the adult patient with obstructive sleep apnea in the perioperative period--avoiding complications. Sleep.2003;26(8):1060-5.
12. Wim van Drongelen PhD, Sujatha Nayak BS¹, David M. Frim MD,PhD. **Michael H. Kohrman MD**. Vernon L. Towle PhD. Hyong C. Lee PhD, Arnetta B. McGee REEGT, Maria S. Chico MS and Kurt E. Hecox MD PhD Seizure anticipation in pediatric epilepsy: use of Kolmogorov entropy. Pediatric Neurology 2003: 29:207-213.
13. Meoli AL, Rosen CL, Kristo D, **Kohrman M**, Gooneratne N, Aguillard RN, Fayle R, Troell R; Clinical Practice Review Committee, American Academy of Sleep Medicine. Nonprescription treatments of snoring or obstructive sleep apnea: an evaluation of products with limited scientific evidence. Sleep. 2003 .;26(5):619-24.
14. **Michael H. Kohrman** and Paul R.Carney Sleep related disorders in neurologic disease during childhood. Pediatric Neurology 2000: 23:107-113.
15. **Michael Kohrman** and James R. Cooley Clinical Algorithm for Practice Parameter: The Neurodiagnostic Evaluation of A Child with A First Simple Febrile Seizure" Pediatrics 1996;97:772.
16. Committee on Quality Improvement, Subcommittee on Febrile Seizures. Practice Parameter: Long- term Treatment of the Child With Simple Febrile Seizures" Pediatrics 1999;103:1307-1309.

17. Provisional Committee on Quality Improvement, Subcommittee on Febrile Seizures. Practice Parameter: The Neurodiagnostic Evaluation of A Child with A First Simple Febrile Seizure" Pediatrics 1996;97:767-771.
18. Susan L. Kerr and **Michael H. Kohrman**. Polysomnogram in Duchenne muscular dystrophy. Journal of Child Neurology 1994;9:332-334.
19. **Michael H. Kohrman**. Brain Death in Infants. Seminars in Neurology 1993;13:116-122.
20. **Michael H. Kohrman** and Betty Spivack. Brain Death in Infants and Children: Sensitivity and Specificity of Current Criteria. Pediatric Neurology 1990;6:47-50
21. Susan L. Kerr, David W. Shucard, **Michael H. Kohrman**, and Michael E. Cohen. Sequential Use of Standard and Ambulatory EEG in Neonatal Seizures. Pediatric Neurology 1990;6:159-162.
22. **Michael H. Kohrman**, Mary S. Hayes, Susan L. Kerr, Thomas J. Langan, and Michael E. Cohen. Phenobarbital for Febrile Seizures. New Eng J Med. 1990;323:484.
23. Howard Faden, G. William Gary, and **Michael Korman**. Numbness and Tingling of Fingers Associated with Parvovirus B19 Infection. J Infectious Diseases 1990;161:354-555.
24. **Michael H. Kohrman**, Colin Sugioka, Peter Huttenlocher, and Jean- Paul Spire. "Inter versus Intra Subject Comparisons using Topographic Mapping of the Electroencephalogram." Clinical EEG 20;248:1989.
25. John R. Hughes and **Michael H. Kohrman**. "Topographic Mapping of the EEG in Premature Infants and Neonates." Clinical EEG 20;228:1989.
26. **Michael H. Kohrman** and Peter Huttenlocher "Takayasu Arteritis: A Treatable Cause of Stroke in Infancy." Pediatric Neurology 2;154:1986.
27. **Michael H. Kohrman**, Daniel Picchietti, Robert Wollman, and Ewa E. Chelmika-Schorr. "A Variant of Fukuyama Congenital Dystrophy in a Non-Japanese Child." Pediatric Neurology 2;290:1986.

Book Chapters

1. **Michael H. Kohrman** Idiopathic Hypersomnia Steven Sheldon, Richard Ferber, Meir Kryger ed. in: Principles and Practice of Pediatric Sleep Medicine Elsevier Saunders Philadelphia 2005.
2. **Michael H. Kohrman.** Neonatal Seizures Laurence Finberg ed. in: Saunders Manual of Pediatric Practice, 2nd Ed. W.B. Saunders Company. Philadelphia.2003.
3. **Michael H. Kohrman.** Seizure Disorders Laurence Finberg ed. in: Saunders Manual of Pediatric Practice, 2nd Ed. W.B. Saunders Company. Philadelphia. 2003.
4. **Michael H. Kohrman.** Status Epilepticus. Laurence Finberg ed. in: Saunders Manual of Pediatric Practice, 2nd Ed W.B. Saunders Company. Philadelphia. 2003.
5. Paul Carney and **Michael H. Kohrman** Epilepsy and Sleep in Infants and Children . Carl W. Bazil Beth A. Malow ,Michele R. Sammaritano, Dan Scott Simmons eds. in Sleep and Epilepsy Elsevier Health Sciences. Amsterdam. 2002
6. Towle VL, Ahmad F, **Kohrman M**, Hecox K, and Chkhenkeli S. 2001.
7. Electrographic coherence patterns of epileptic seizures. Milton J. and P. Jung, editors. Epilepsy as a dynamic disease: Springer-Verlag.
8. **Michael H. Kohrman.** Pediatric Sleep Disorders. Kenneth Swaiman and Steven Ashwal eds. in Pediatric Neurology Mosby St. Louis 1999.
9. **Michael H. Kohrman.** Seizure Disorders Laurence Finberg ed. in: Saunders Manual of Pediatric Practice, W.B. Saunders Company. Philadelphia 1998 .
10. **Michael H. Kohrman.** Status Epilepticus. Laurence Finberg ed. in: Saunders Manual of Pediatric Practice, W.B. Saunders Company. Philadelphia. 1998.
11. **Michael H. Kohrman** Sleep Disturbances Bernard Maria ed in Advances in Pediatric Neurology Decker, Hamilton Ontario, 1998.
12. **Michael H. Kohrman.** Cognitive and Behavioral Effects of Anticonvulsants in Children. in Siegfried Streufert and Francis Gengo ed. in: Effects of Drugs on Human Functioning, Karger Basil 1993 p114-133.

Abstracts and Presentations

1. **Michael Kohrman**, Tim Vanderbuilt Behavioral Problems Correlate with Sleep Symptoms in Children. Presented at APSS Minneapolis June 2007.
2. Sameena k Siddiqui, **Michael Kohrman**, Kenneth Silver. Epilepsy Presenting as Paroxysmal Kinesigenic Hemidystonia. Presented 59th Annual Meeting of the American Academy of Neurology. Boston April 2007.
3. Hyong C. Lee, Wim van Drongelen, Arnetta B. McGee, David M. Frim, and **Michael H. Kohrman** Detection of Epileptiform Activity in Continuously Monitored Pediatric Patients AES meeting Sandiego Ca. December 2006
4. Scott J. Hunter, Alla Rubinstein, **Michael Kohrman**, Kurt Hecox, & Adam Grieve Neuropsychological change associated with Levetiracetam (Keppra) when treating children with Epilepsy. Presented at the International Neuropsychological Society Meetings, February 2006, Boston, MA, USA
5. Kurt E. Hecox, Fengmei Lui, Seaon Marler, Jennifer Dwyer, **Michael Kohrman**, Arnetta McGhee, and Joel Fontanarosa COMPARISONS OF INTERICTAL AND ICTAL SPATIAL DISTRIBUTION OF DYNAMICAL SYSTEMS ABNORMALITIES IN PEDIATRIC EPILEPSIES. Presented AES meeting Washington DC, December 2005. Epilepsia Volume 46 s8, Page 312 2005.
6. **M. Kohrman**; M. Luc; A. Gupta; J. Birnberg .Qualitative Characterization of Sleep Disorders in Children with Headache . . presented at APSS Denver June 2005 Sleep 28 p 2005
7. **Michael H. Kohrman**, Sunilla O'Connor, Debra Williams, Peter R. Huttenlocher, David Frim, and Kurt Hecox VAGUS NERVE STIMULATION FOR THE TREATMENT OF REFRACTORY EPILEPSY SECONDARY TO TUBEROUS SCLEROSIS - A PEDIATRIC PERSPECTIVE. Epilepsia 45 Suppl. 7 :155 (Abst. 1.414) , 2004
8. Kurt E. Hecox, Angela Song, Jennifer Dwyer, Seaon Marler, **Michael Kohrman**, Fengmei Lui, and Sunila O'Connor. STATISTICAL PROPERTIES OF NONLINEAR DYNAMIC SYSTEMS MEASURES IN THE PEDIATRIC AGED PATIENT. Presented at AES Meeting New Orleans December 2004. Epilepsia 45 Suppl. 7 :250 (Abst. 2.176) , 2004

9. Sunila O'onnor, Jennifer Dwyer, Angela N. Song, Fengmei Liu, Seoan Marler, **Michael Kohrman**, Arnetta McGee, and Kurt E. Hecox. THE RELATIONSHIP BETWEEN SURFACE AND INTRACRANIAL NONLINEAR DYNAMIC CHANGES DURING SEIZURES. Presented at AES Meeting New Orleans December 2004. Epilepsia 45 Suppl. 7 :251 (Abst. 2.181) , 2004
10. Towle V. L., Chkhenkeli S. A., Hunter J. D., **Kohrman M. H.**, Frim D. M. and Hecox K. E. ECoG coherence patterns recorded from epileptic patients are helpful in defining epileptogenic areas. Paper presented at the annual meeting of the European Society for Neuroscience, Lisbon, July, 2004.
11. M. Carroll; H. Lee; W. van Drongelen; K. Hecox; **M. Kohrman** Physiological State May Confound Seizure Prediction Algorithms Using Nonlinear Metrics. APSS Philadelphia 6/2004. Sleep 27: pA370 2004
12. Vernon L. Towle, Ph.D., **Michael Kohrman, M.D.**, Kurt Hecox, M.D., Diana M. Hanan, Bhriana Patel, Bryan Singer and John D. Hunter, Ph.D. ECoG coherence patterns recorded from subdural electrodes. Paper presented at the annual meeting of the American Society for Neurophysiologic Monitoring, SanAntonio, May, 2004.
13. **Michael H. Kohrman**, Jonathan M. Birnberg, Anu Gupta, Darian Redick, Symptoms of Sleepiness in Children on Anticonvulsant Monotherapy : A Comparison presented AAN 2003 San Francisco Neurlogy 62 (suppl 5) A312-313 2004.
14. Kurt E. Hecox, MD Ph.D., **Michael H. Kohrman**, MD, Angela Song, MS, Larkin Mitchell, BS, Maria Chico, MS, Hyong Lee, Ph.D., Wim van Drongelen, Ph.D. A COMPARATIVE ANALYSIS OF SEIZURE DETECTION USING NON-LINEAR SYSTEMS MEASURES IN THE PEDIATRIC AGE GROUP. AES Boston Dec 2003 Epilepsia 44 Suppl. 9 :229 (Abst. 2.160) , 2003
15. **Michael H. Kohrman, MD.**, Angela N. Song, BS., Sunila E. O'Connor, MD., Maria S. Chico, RN., Charles J. Marcuccilli, MD, PhD., Wim van Drongelen, PhD., Arnetta McGee, Reegt, Kurt E. Hecox, MD, PhD.. PATTERNS OF ABNORMALITIES OBSERVED IN DYNAMIC SYSTEMS ANALYSIS OF NEOCORTICAL SEIZURES AES Boston Dec 2003 Epilepsia 44 Suppl. 9 :230 (Abst. 2.162) , 2003

16. Charles J. Marcuccilli, Ph.D., M.D., Henner Koch, Fernando Pena, Ph.D., Wim van Drongelen, Ph.D., Andrew K. Tryba, Ph.D., Marjorie A. Parkis, Ph.D., Kurt E. Hecox, M.D., Ph.D., **Michael H. Kohrman, M.D.**, David M. Frim, M.D., Ph.D., Sunila E. OConnor, M.D., Maria S. Chico, RN, MS, CPNP, Jan-Marino Ramirez, Ph.D. RATIONAL PHARMACOTHERAPY: RELATIONSHIP BETWEEN *IN VITRO* ELECTROPHYSIOLOGY AND CLINICAL MEASURES AES Boston Dec 2003 Epilepsia 44 Suppl. 9 :244 (Abst. 2.202) , 2003
17. Jan-Marino Ramirez, Ph.D., Henner Koch, Fernando Pena, Ph.D., Wim van Drongelen, Ph.D., Andrew K. Tryba, Ph.D., Marjorie A. Parkis, Ph.D., Jessica A. Loweth, Kurt E. Hecox, M.D., Ph.D., **Michael H. Kohrman, M.D.**, David M. Frim, M.D., Ph.D., Maria S. Chico, RN, MS, CPNP, Charles J. Marcuccilli, Ph.D., M.D. *IN VITRO* ELECTROPHYSIOLOGICAL DIFFERENCES BETWEEN LEAST AND MOST ABNORMAL TISSUE OBTAINED FROM PEDIATRIC PATIENTS WITH INTRACTABLE EPILEPSY AES Boston Dec 2003 Epilepsia 44 Suppl. 9 :245 (Abst. 2.204) , 2003
18. Sunila E. OConnor, MD, Maria S. Chico, CNP, Angela N. Song, BS, D. Larkin Mitchell, BS, Charles J. Marcuccilli, MD, PhD, **Michael H. Kohrman, MD**, Wim van Drongelen, PhD, Kurt E. Hecox, MD, PhD RAPID CYCLING OF VAGUS NERVE STIMULATORS MAY WORSEN SEIZURE CONTROL AES Boston Dec 2003 , Epilepsia 44 Suppl. 9 :325 (Abst. 2.438) , 2003
19. **Michael H. Kohrman,**., Darian Reddick, Wim van Drongelen. Non Linear Time Series Analysis of Arousals in Children. APSS Meeting Chicago June 2003 Sleep 26 Abstract supplement A385
20. **Michael H. Kohrman**, Anu Gupta., Darian Reddick, ., Shelly Pawlowski, . The Effects of Anticonvulsants on Sleepiness in Children with Epilepsy .presented Meeting of the American Academy of Neurology 2003 Honolulu Hawaii.
21. Charles J. Marcuccilli, Henner Koch, Fernando Pena, Wim van Drongelen, Marjorie A. Parkis, Andrew K. Tryba, Jan-Marino Ramirez, **Michael H. Kohrman**, David M. Frim, Maria S. Chico, Kurt E. Hecox. . Bursting Properties in Human Neocortical Neurons Obtained from Epileptic Foci of Pediatric Patients. presented Meeting of the American Academy of Neurology 2003 Honolulu Hawaii.
22. Vernon L. Towle, Scott Simon, Jennifer E. Dwyer, John Hunter, Jacob Reimer, Wim van Drongelen, **Michael Kohrman**, Sozari Chkhenkeli. ANALYSIS OF ECOG COHERENCE PATTERNS RECORDED FROM EPILEPTIC PATIENTS IS HELPFUL FOR DELINEATING THE BORDERS Epilepsia 43 Suppl. 7:114(Abst. 1.314), 2002

23. **Michael H. Kohrman**, Darian Reddick . Increased Symptoms of Excessive Daytime Sleepiness in Children with Epilepsy. *Epilepsia* 43 Suppl. 7:42(Abst. 1.113), 2002
24. **Michael H. Kohrman**, Darian Reddick. Increased Symptoms of Excessive Daytime Sleepiness in Children with Epilepsy. *Sleep* 2002: 25; abstract supplement pA494)
25. Kurt.E. Hecox, M.D., Ph.D., Pediatrics.; Wim. van Drongelen, Ph.D., Pediatrics. V.Leo. Towle, Ph.D., . Maria. Chico, M.S **Michael Kohrman, M.D** A. McGee, D. Frim, M.D., Ph.D Validation Methods for Source Localization Algorithms *Epilepsia* 42 Suppl. 7:37(Abst. 1.112), 2001
26. Esra Tasali, Wallace Mendelson, Jean Paul Spire, and **Michael H. Kohrman** .
27. Arousal index in children with normal polysomnograms . *Sleep*2001: 24 ;abstract supplement p. A227.
28. Towle VL, **Kohrman M**, Ahmad F, and Chkhenkeli S. 2000. Human lateral electrocorticographic coherence recorded during seizures. In: *Proceedings of the IEEE-EMBS*, 40.
29. **Michael H. Kohrman**. Use of Gabapentin Adjunctive Therapy for Nocturnal Partial Seizures with Secondary Generalization during Adolescence. University of Florida Celebration of Research April 1999.
30. **Michael H. Kohrman** . Use of Gabapentin Adjunctive Therapy for Nocturnal Partial Seizures with Secondary Generalization during Adolescence. *Epilepsia* 39:S6,p163 1998.
31. **Michael H. Kohrman**. Use of Gabapentin Adjunctive Therapy for Nocturnal Partial Seizures with Secondary Generalization during Adolescence. *Annals of Neurology* 44:568,1998.
32. **Michael H. Kohrman** , Susan L. Kerr and Sharon Schumacher. Effect of Sleep Disordered Breathing on Periodic Leg Movements of Sleep in Children., Meeting of the Association of Professional Sleep Societies San Francisco Ca. June 1997.
33. Ehsan Afshani, **Michael H. Kohrman**, John E. Fisher, Mary Jane Petruzzi. Diagnostic Imaging Evaluation of Children with Infantile Myoclonic Encephalopathy (IME) Opsoclonus Associated with Neuroblastoma. Presented, Meeting of the American Society of Neuroradiology. Chicago Illinois, April 1995.

34. Susan L. Kerr and **Michael Kohrman**. Respiratory Decompensation in Patients with Arnold Chiari Malformation. Presented, Meeting of the American Electroencephalographic Society. Washington D.C. September 1995.
35. **Michael H. Kohrman**, David W. Shucard, Gregory L. Ciupak, and Lori Monte. Use of a Continuous Performance Task as a Measure of Sleepiness. Presented, Annual meeting of Child Neurology Society, San Francisco, CA, October 1994.
36. Brian Rogers, Joan Arvedson, **Michael Kohrman**, Linda Brodsky. Hypoventilation During Oral Feeding in Children with Neurogenic Dysphagia. Presented at SENTAC meeting, Sacramento Ca. December 1994.
37. **Michael H. Kohrman**. The Safety of Chloral Hydrate in Clinical Neurophysiology. Annals of Neurology 34;506:1993. Presented at the meeting of the Child Neurology Society, Orlando, Fla. October 1993.
38. **Michael H. Kohrman**, Susan L. Kerr, and Lori Monte. Incidence of Sharp Wave Discharges During REM Sleep in Children. Presented at the meeting of the American Electroencephalographic Society, Philadelphia Pa. Dec 1991.
39. **Michael H. Kohrman**, Susan L. Kerr, Michael E. Cohen, Darlene Limber, Kevin Potts and Richard Doll. The Value of Inter-Operative Somatosensory Evoked Potential Monitoring in the Pediatric Population. Presented at the meeting of the American Electroencephalographic Society, Philadelphia Pa. Dec 1991.
40. Margaret Parowski, **Michael H. Kohrman**, Jeffery Gale, and John J. Treanor. EEG Changes Associated with Clozapine. Presented at the meeting of the American Electroencephalographic Society, Philadelphia Pa. Dec 1991.
41. **Michael H. Kohrman**, Susan L. Kerr, Jane K. O'Donnell, Nadine K. Mazyrka, and Maureen E. Montgomery. The risk of Sudden Infant Death Syndrome and Apparent Life Threatening Events in Infants Exposed to Cocaine. Annals of Neurology 28;456:1990. Presented at the Child Neurology Society meeting, Atlanta Georgia October 1990.
42. **Michael H. Kohrman**, Raymond D. Cheng, and Susan L. Kerr. Clinical Correlation of Isolated Wave V Delay in the Brainstem Auditory Evoked Response with MRI. Annals of Neurology 28;460:1990. Presented at the Child Neurology Society meeting, Atlanta Georgia October 1990.

43. Susan L. Kerr, **Michael H. Kohrman**, Ian T. Nathanson, and Jane K. O'Donnell. Polysomnogram as Prognostic Indicator in Duchenne Muscular Dystrophy. Annals of Neurology 28;429:1990. Presented at the Child Neurology Society meeting, Atlanta Georgia October 1990.
44. **Michael H. Kohrman** and Betty Spivack. Brain Death in Infants and Children: Sensitivity and Specificity of Current Criteria. Presented at the Upstate New York Transplant Program, Buffalo New York, April 1989.
45. Raymond D. Cheng, **Michael H. Kohrman**, Susan L. Kerr, Patricia K. Duffner, and Michael E. Cohen. Thrombocytopenia Associated with Valproic acid that Requires Platelet Transfusion. Annals of Neurology 26;457-458:1989. Presented at the Child Neurology Society meeting, San Antonio Texas, October 1989.
46. **Michael H. Kohrman** and John R. Hughes. The Topographic Patterns of the Preterm and Neonatal EEG. Presented at the meeting of the American Electroencephalographic Society, St. Louis Mo. Sept. 1987. J. Clin. Neurophys. 4;238:1987.
47. **Michael H. Kohrman** and John R. Hughes. The Use of Topographic Mapping to Assess the Variability of the Premature and Neonatal EEG. Presented at the meeting of the American Electroencephalographic Society, St. Louis Mo. Sept. 1987. J. Clin. Neurophys. 4;237:1987.
48. **Michael H. Kohrman**, Colin Sugioka, Peter Huttenlocher, and Jean- Paul Spire. "Inter versus Intra Subject Comparisons using Topographic Mapping of the Electroencephalogram." Presented at the joint meeting of the American Epilepsy Society and the American Electroencephalographic Society, Seattle, Wa., Nov. 1986. Electroencephalography and Clinical Neurophysiology 64;81p:1986.
49. **Michael H. Kohrman**, Colin Sugioka, Peter Huttenlocher, and Jean- Paul Spire. "Inter versus Intra Subject Comparisons using Topographic Mapping of the Electroencephalogram." Presented at Chicago area Evoked Potential Society Nov. 1986.
50. **Michael H. Kohrman**, Daniel Picchietti, Robert Wollman, and Ewa E. Chelmika-Schorr. "Fukuyama's Congenital Muscular Dystrophy (FCMD): Variant Form with Muscle Inflammation in a Non-Japanese American Child." Annals of Neurology 18;400:1985. Presented at the Child Neurology Society meeting, Memphis, Tenn. October 1985.
51. **Michael H. Kohrman** and Peter Huttenlocher. "Takayasu Arteritis: A Treatable Cause of Stroke In Infancy." Annals of Neurology 18;386-387:1985. Presented at the Child Neurology Society meeting, Memphis, Tenn. October 1985.

Abstracts published but not presented at national meetings

Raymond D. Cheng, **Michael H. Kohrman**, Susan L. Kerr, and Michael E. Cohen. Freeman-Sheldon Syndrome with Profound Developmental Delay, Mixed Apnea, and Seizures. Child Neurology Society meeting, Atlanta Georgia October 1990.

Michael H. Kohrman, Margaret W. Parowski, Mary Hayes, and Francis M. Gengo. Does Carbamazepine Enzyme Induction Cause Elevated Plasma Cholesterol Levels? Child Neurology Society meeting, Memphis, Tenn. October 1989.

Susan L. Kerr, David W. Shucard, **Michael H. Kohrman**, and Michael E. Cohen. Standard EEG and Ambulatory EEG in the Evaluation of Neonatal Seizures. Child Neurology Society meeting, Memphis, Tenn. October 1989.

Michael H. Kohrman, Susan L. Kerr, Patricia K. Duffner, and Michael E. Cohen. Hepatic Injury as a Consequence of Status Epilepticus. Child Neurology Society meeting, Halifax Nova Scotia Sept. 1988.

MHK 6/6/07



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

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Cellular and Systems Neurobiology
Building 35, Room 3C313
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NINDS, National Institutes of Health
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July 19, 2007

U.S. CIS
Nebraska Service Center
PO Box 87140
Lincoln, NE 68501-7140

Re: The University of Chicago's I-140 Petition for Seoan Marler in
the EB-2 Category for Exceptional Ability in the Sciences

Dear Sir or Madam:

I write in support of the above referenced petition. I am a research fellow with the U.S. Department of Health & Human Services (DHHS) National Institutes of Health ("NIH"). NIH is the primary Federal agency for conducting and supporting medical research. My position is with the National Institute of Neurological Disorders and Stroke.

Helping to lead the way toward important medical discoveries that improve people's health and save lives, NIH scientists investigate ways to prevent disease as well as the causes, treatments, and even cures for common and rare diseases. NIH research impacts child and teen health, men's health, minority health, seniors' health, women's health and wellness and lifestyle issues. Composed of twenty-seven (27) institutes and centers, the NIH provides leadership and financial support to researchers in every state and throughout the world.

While I do not personally know Seoan Marler, I understand that she is an important part of the University of Chicago Comer Children's Hospital Pediatric Epilepsy Center's research team. This research is at the very forefront of researching a debilitating disease in children. Her skills, which I understand are exceptional in every way, are critical to the success of the team's work. I became aware of Dr. Marler research through close colleagues in the field of neuroscience who hold her work in very high regard. I have reviewed her body of research and curriculum vitae as well as discussed the impact of her work with colleagues who are leaders in his field.



RECEIPT NUMBER LIN-08-018-53112		CASE TYPE I140 IMMIGRANT PETITION FOR ALIEN WORKER
RECEIVED DATE October 22, 2007	PRIORITY DATE	PETITIONER UNIV CHICAGO DEPT ORGANISMAL
NOTICE DATE October 22, 2007	PAGE 1 of 1	BENEFICIARY MARLER, SEOAN
ROBERT CARPENTER CARPENTER CAPT CHTD 53 W JACKSON BLVD STE 1752 CHICAGO IL 60604 08CV3077 PH JUDGE COAR MAGISTRATE JUDGE ASHMAN		Notice Type: Receipt Notice Amount received: \$ 475.00 Section: Mem of Profession w/Adv Deg, or of Exceptn'l Ability Sec.203(b) (2)

Receipt Notice- This notice confirms that USCIS received your application or petition ("this case") as shown above. If any of the above information is incorrect, please immediately call 800-375-5283 to let us know. This will help avoid future problems.

This notice does not grant any immigration status or benefit. It is not even evidence that this case is still pending. It only shows that the application or petition was filed on the date shown.

Processing time - Processing times vary by kind of case. You can check our website at www.uscis.gov for our current "processing times" for this kind of case at the particular office to which this case is or becomes assigned. On our websites "case status online" page, you can also view status or sign up to receive free e-mail updates as we complete key processing steps on this case. During most of the time this case is pending, however, our systems will show only that the case has been received, and the processing status will not have changed, because we will be working on other cases that were filed earlier than this one. We will notify you by mail, and show in our systems, when we make a decision on this case or if we need something from you. If you do not receive an initial decision or update from us within our current processing time, check our website or call 800-375-5283. Please save this notice, and any other notice we send you about this case, and please make and keep a copy of any papers you send us by any means, along with any proof of delivery to us. Please have all these papers with you if you contact us about this case.

If this case is an I-130 Petition - Filing and approval of a Form I-130, Petition for Alien Relative, is only the first step in helping a relative immigrate to the United States. The beneficiaries of a petition must wait until a visa number is available before they can take the next step to apply for an immigrant visa or adjustment of status to lawful permanent residence. To best allocate resources, USCIS may wait to process forms I-130 until closer to the time when a visa number will become available, which may be years after the petition was filed. Nevertheless, USCIS processes forms I-130 in time not to delay relatives ability to take the next step toward permanent residence once a visa number does become available. If, before final action on the petition, you decide to withdraw your petition, your family relationship with the beneficiary ends, or you become a U.S. citizen, call 800-375-5283.

Applications requiring biometrics- In some types of cases USCIS requires biometrics. In such cases, USCIS will send you a SEPARATE appointment notice with a specific date, time and place for you to go to a USCIS Application Support Center (ASC) for biometrics processing. You must WAIT for that separate appointment notice and take it (NOT this receipt notice) to your ASC appointment along with your photo identification. Acceptable kinds of photo identification are: a passport or national photo identification issued by your country, a drivers license, a military photo identification, or a state-issued photo identification card. If you receive more than one ASC appointment notice, even for different cases, take them both to the first appointment.

If your address changes- If your mailing address changes while your case is pending, call 800-375-5283 or use the "Online Change of Address" function on our website. Otherwise, you might not receive notice of our action on this case.

Please see the additional information on the back. You will be notified separately about any other cases you filed.

NEBRASKA SERVICE CENTER
U. S. CITIZENSHIP & IMMIG SERVICE
P.O. BOX 82521
LINCOLN NE 68501-2521
Customer Service Telephone: 800-375-5283





ASC Appointment Notice

APPLICATION NUMBER

LIN0803752371

NOTICE DATE

11/21/2007

CASE TYPE

I485 Application to Register Permanent Resident or Adjust Status

SOCIAL SECURITY NUMBER

USCIS A#

A089591412

CODE

3

TCR

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NSC

PAGE

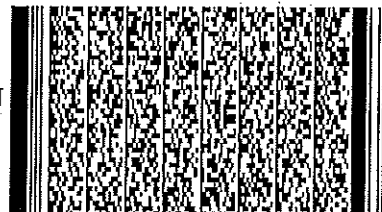
1 of 1

SEOAN MARLER
c/o ROBERT CARPENTER
CARPENTER CAPT CHTD
53 W JACKSON STE 1752
CHICAGO, IL 60604-

08CV3077 PH

JUDGE COAR

MAGISTRATE JUDGE ASHMAN



To process your application, the U. S. Citizenship & Immigration Services (USCIS) must capture your biometrics.

PLEASE APPEAR AT THE BELOW APPLICATION SUPPORT CENTER AT THE DATE AND TIME SPECIFIED.

IF YOU FAIL TO APPEAR AS SCHEDULED, YOUR APPLICATION WILL BE CONSIDERED ABANDONED.

APPLICATION SUPPORT CENTER

USCIS BROADWAY
4853 N. BROADWAY
CHICAGO, IL 60640

PLEASE READ THIS ENTIRE NOTICE CAREFULLY.

DATE AND TIME OF APPOINTMENT

12/06/2007

3:00 PM

WHEN YOU GO TO THE APPLICATION SUPPORT CENTER TO HAVE YOUR BIOMETRICS TAKEN, YOU MUST BRING:

1. **THIS APPOINTMENT NOTICE** and
2. **PHOTO IDENTIFICATION.** Naturalization applicants must bring their Alien Registration Card. All other applicants must bring a passport, driver's license, national ID, military ID, or State-issued photo ID. If you appear without proper identification, your biometrics may not be taken.

CELL PHONES, CAMERAS, OR OTHER RECORDING DEVICES ARE NOT PERMITTED.

REQUEST FOR RESCHEDULING

- ☐ Please reschedule my appointment. Upon receipt of your request, you will be provided a new appointment notice. Make a copy of this notice for your records, then mail the original with your request to USCIS BROADWAY, 4853 N. BROADWAY, CHICAGO, IL 60640

APPLICATION NUMBER 1

I485 - LIN0803752371



If you have any questions regarding this notice, please call 1-800-375-5283.

WARNING!

Due to limited seating availability in our lobby area, only persons who are necessary to assist with transportation or completing the biometrics worksheet should accompany you.

If you have open wounds or bandages/casts when you appear, the USCIS may reschedule your appointment if it is determined your injuries will interfere with taking your biometrics.

08CV3077 PH
JUDGE COAR
MAGISTRATE JUDGE ASHMAN

U.S. Citizenship and Immigration Services

EMPLOYMENT AUTHORIZATION CARD


The person identified is authorized to work in the U.S. for the validity of this card.

NAME **MARLER, SEAN**
Sean Marler

AS 089-591-412
CARD # **LINO033752434**

Birthdate **06/18/78** Category **01** Sex **F**

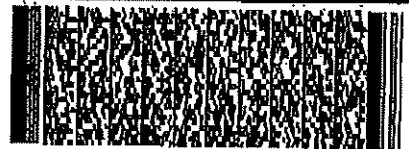
Country **USA**
Employer **U.S. Citizenship and Immigration Services**
Notes and Remarks **NOTED AND SECURED**



NOT VALID FOR REENTRY TO U.S.
CARD VALID FROM **01/18/08** EXPIRES **01/17/09**

Biometric not available





This card is not evidence of U.S. citizenship or permanent residence.
This document is void if altered, and may be revoked by the
U. S. Government

FORM I-766 Rev. (05-200)

UNITED STATES OF AMERICA

RECEIPT NUMBER LIN-08-037-52434		CASE TYPE I765
RECEIPT DATE November 14, 2007		APPLICATION FOR EMPLOYMENT AUTHORIZATION
PRIORITY DATE		APPLICANT A089 591 412
NOTICE DATE January 22, 2008		MARLER, SEOAN
PAGE 1 of 1		
ROBERT CARPENTER CARPENTER CAPT CHTD 53 W JACKSON BLVD STE 1752 CHICAGO IL 60604		Notice Type: Approval Notice Class: C09 Valid from 01/18/2008 to 01/17/2009 Representative's Copy

Your application for employment authorization has been approved. The Form I-688B, Employment Authorization Document, was sent under separate cover to the beneficiary.

This card authorizes your employment in the United States. Show this card to your employer to verify authorization to work during the dates on the card.

If any information on the card is incorrect, please write the office listed below. Include your Employment Authorization Document, I-688B, a photocopy of this notice, and evidence to support the necessary corrections.

THIS APPROVAL NOTICE IS NOT A VISA OR EVIDENCE OF EMPLOYMENT AUTHORIZATION, NOR MAY IT BE USED IN PLACE OF A VISA OR FORM I-688B. However, this Approval Notice in conjunction with a document that establish identity, such as those acceptable documents listed on List B of Form I-9, Employment Eligibility Verification, can be evidence of employment authorization until the new card is received, but no more than 30 days from the issuance of this Approval Notice.

POSTED
BY MRC / DATE 01/30/08

Please see the additional information on the back. You will be notified separately about any other cases you filed.

NEBRASKA SERVICE CENTER
U. S. CITIZENSHIP & IMMIG SERVICE
P.O. BOX 82521
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Customer Service Telephone: 800-375-5283



JUDGE COAR

MAGISTRATE JUDGE ASHMAN

Case Status Search

Receipt Number: LIN0801853112

Application Type: I140, IMMIGRANT PETITION FOR ALIEN WORKER

Current Status:

Case received and pending.

On October 22, 2007, we received this I140 IMMIGRANT PETITION FOR ALIEN WORKER, and mailed you a notice describing how we will process your case. Please follow any instructions on this notice. We will notify you by mail when we make a decision or if we need something from you. If you move while this case is pending, call customer service. We process cases in the order we receive them. You can use our processing dates to estimate when yours will be done. This case is at our NEBRASKA SERVICE CENTER location. Follow the link below to check processing dates. You can also receive automatic e-mail updates as we process your case. Just follow the link below to register.

If you have a question about case status information provided via this site, or if you have not received a decision from USCIS within the current processing time listed, please contact the USCIS Customer Service at (800) 375 5283 or 1-800-767-1833 (TTY).



08CV3077 PH
JUDGE COAR
MAGISTRATE JUDGE ASHMAN

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U.S. Citizenship and Immigration Services Nebraska Service Center Processing Dates Posted May 15, 2008

The processing times shown below are a tool for our customers to gauge our current processing times. When applications and petitions are completed within our target timeframes, that goal will be shown in the data display.

The processing times shown below are for applications that have just been completed. If you have just filed your application, these timeframes may not reflect how long your application will take to be completed. We encourage you to check this page periodically before inquiring about your case. The processing times are updated monthly.

USCIS has received a significant increase in the number of applications filed. In July and August, nearly 2.5 million applications and petitions of all types were received. This compares to 1.2 million applications and petitions received in the same time period last year. This fiscal year, we received 1.4 million applications for naturalization; nearly double the volume we received the year before. The agency is working to improve processes and focus increased resources, including hiring approximately 1,500 new employees, to address this workload.

As a result, average processing times for certain application types may be longer. In particular, naturalization applications filed after June 1, 2007 may take approximately 13-15 months to process.

We offer a variety of services after you file. For example, for most kinds of cases you can [check the status of your case online](#).

For more information about when and how to contact us, whether your case is outside our processing time or if there are other issues, please see our customer guide –

[Case Services - How do I... know what kind of services are available to me after I file my application or petition?](#)

Service Center Processing Dates for **Nebraska Service Center** Posted May 15, 2008

Form	Title	Classification or Basis for Filing	Processing Timeframe
I-90	Application to Replace Permanent Resident Card	Initial issuance or replacement	December 20, 2007
I-90	Application to Replace Permanent Resident Card	10-year renewal	October 15, 2007
I-90A	Application to Replace Permanent Resident Card	Initial issuance or replacement for Special Agricultural Workers (SAW)	October 15, 2007
I-102	Application for Replacement/Initial Nonimmigrant Arrival/Departure Record	Initial issuance or replacement of a Form I-94	February 15, 2008
I-129	Petition for A Nonimmigrant Worker	H-1B - Specialty occupation - Visa to be issued abroad	March 16, 2008

I-129	Petition for A Nonimmigrant Worker	H-1B - Specialty occupation - Change of status in the U.S.	March 16, 2008
I-129	Petition for A Nonimmigrant Worker	H-1B - Specialty occupation - Extension of stay in the U.S.	March 16, 2008
I-129	Petition for A Nonimmigrant Worker	H-2A - Temporary workers	April 15, 2008
I-129	Petition for A Nonimmigrant Worker	H-2B - Other temporary workers	April 15, 2008
I-129	Petition for A Nonimmigrant Worker	H-3 - Temporary trainees	March 16, 2008
I-129	Petition for A Nonimmigrant Worker	L - Intracompany transfers	March 16, 2008
I-129	Petition for A Nonimmigrant Worker	Blanket L	March 16, 2008
I-129	Petition for A Nonimmigrant Worker	O - Extraordinary ability	March 16, 2008
I-129	Petition for A Nonimmigrant Worker	P - Athletes, artists, and entertainers	March 16, 2008
I-129	Petition for A Nonimmigrant Worker	Q - Cultural exchange visitors and exchange visitors participating in the Irish Peace process	March 16, 2008
I-129	Petition for A Nonimmigrant Worker	R - Religious occupation	March 16, 2008
I-129	Petition for A Nonimmigrant Worker	TN - North American Free Trade Agreement (NAFTA) professional	March 16, 2008
I-131	Application for Travel Document	Permanent resident applying for a re-entry permit	July 30, 2007
I-131	Application for Travel Document	Refugee or asylee applying for a refugee travel document	July 30, 2007
I-131	Application for Travel Document	Haitian Refugee Immigrant Fairness Act (HRIFA) principal applying for advance parole	February 15, 2008
I-131	Application for Travel Document	Haitian Refugee Immigrant Fairness Act (HRIFA) dependent applying for advance parole	February 15, 2008
I-131	Application for Travel Document	All other applicants for advance parole	February 15, 2008
I-140	Immigrant Petition for Alien Worker	Extraordinary ability	January 19, 2007
I-140	Immigrant Petition for Alien Worker	Outstanding professor or researcher	April 27, 2007
I-140	Immigrant Petition for Alien Worker	Multinational executive or manager	February 21, 2007
I-140	Immigrant Petition for Alien Worker	Schedule A Nurses	February 15, 2007
I-140	Immigrant Petition for Alien Worker	Advanced degree or exceptional ability	July 05, 2007
I-140	Immigrant Petition for Alien Worker	Advanced degree or exceptional ability requesting a National Interest Waiver	February 27, 2007
I-140	Immigrant Petition for Alien Worker	Skilled worker or professional	March 10, 2007
I-140	Immigrant Petition for Alien Worker	Unskilled worker	May 01, 2007

I-212	Application for Permission to Reapply for Admission into the U.S. After Deportation or Removal	Readmission after deportation or removal	October 30, 2007
I-360	Petition for Amerasian, Widow(er), or Special Immigrant	All other special immigrants	November 17, 2007
I-485	Application to Register Permanent Residence or to Adjust Status	Employment-based adjustment applications	July 14, 2007
I-485	Application to Register Permanent Residence or to Adjust Status	Based on grant of asylum more than 1 year ago	March 21, 2007
I-485	Application to Register Permanent Residence or to Adjust Status	Based on refugee admission more than 1 year ago	February 01, 2007
I-485	Application to Register Permanent Residence or to Adjust Status	Under the Haitian Refugee Immigrant Fairness Act (HRIFA)	July 20, 2007
I-485	Application to Register Permanent Residence or to Adjust Status	Under the Indochinese Adjustment Act	April 15, 2007
I-539	Application to Extend/Change Nonimmigrant Status	Change of status to H or L dependents	February 15, 2008
I-539	Application to Extend/Change Nonimmigrant Status	Change status to the F or M academic or vocational student categories	February 15, 2008
I-539	Application to Extend/Change Nonimmigrant Status	Change Status to the J exchange visitor category	February 15, 2008
I-539	Application to Extend/Change Nonimmigrant Status	All other change of status applications	February 15, 2008
I-539	Application to Extend/Change Nonimmigrant Status	Extension of stay for H and L dependents	February 15, 2008
I-539	Application to Extend/Change Nonimmigrant Status	Extension of Stay for F or M academic or vocational students	February 15, 2008
I-539	Application to Extend/Change Nonimmigrant Status	Extension of Stay for J exchange visitors	February 15, 2008
I-539	Application to Extend/Change Nonimmigrant Status	All other extension applications	February 15, 2008
I-612	Application for Waiver of the Foreign Residence Requirement	Application for a waiver of the 2-year foreign residence requirement based on exceptional hardship or persecution	July 31, 2007
I-730	Refugee/Asylee Relative Petition	Petition for accompanying family members of a refugee or an asylee	November 21, 2006
I-751	Petition to Remove the Conditions on Residence	Removal of lawful permanent resident conditions (spouses of U.S. citizens and lawful permanent residents)	September 05, 2007
I-765	Application for Employment Authorization	Based on an approved asylum application [(a)(5)]	March 17, 2008
I-765	Application for Employment Authorization	Based on a request by a qualified F-1 academic student. [(c)(3)]	February 15, 2008
I-765	Application for Employment Authorization	Based on a pending asylum application [(c)(8)]	March 17, 2008

I-765	Application for Employment Authorization	Based on a pending I-485 adjustment application [(c)(9)]	February 15, 2008
I-765	Application for Employment Authorization	All other applications for employment authorization	February 15, 2008
I-817	Application for Family Unity Benefits	Voluntary departure under the family unity program	November 17, 2007
I-824	Application for Action on an Approved Application or Petition	To request further action on an approved application or petition	April 08, 2007

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